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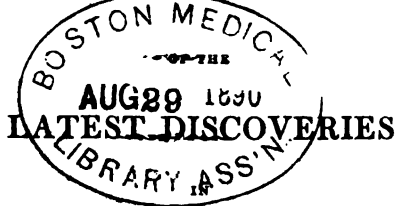


THE
DUBLIN JOURNAL

OF
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EXHIBITING

A COMPREHENSIVE VIEW



**MEDICINE, SURGERY, AND THE COLLATERAL
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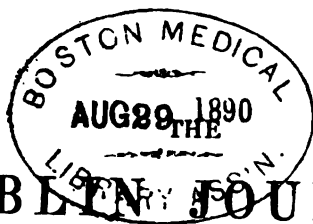
In consequence of the length and importance of the Original Communications the Editors have been obliged to defer the publication of several Papers. They shall appear in the ensuing Number.

The review of Dr. Kennedy's Report of the Cork-street Fever Hospital will be inserted in the May Number.

The Reports of the Meetings of the Pathological Society of Dublin will be continued in this Journal.

Papers have been received from Dr. Mac Donald of Cavan, Dr. Hudson, and Dr. A. Smith.

The Editors beg to acknowledge the receipt of numerous works and Journals, of which notices shall be inserted on the first opportunity.



DUBLIN JOURNAL

OF

MEDICAL SCIENCE,

1 MARCH, 1840.

PART I.

ORIGINAL COMMUNICATIONS.

ART. I.—*A further Reply to Mr. H. Carmichael's Views on the Position of the Placenta, &c., in which is given a Statistical Table of its Situation in 100 Cases, as determined by the Stethoscope, and the Measurements of the Membranes.* By RICHARD DOHERTY, M. D.

THE November Number of the Dublin Journal contains a second essay from Mr. Hugh Carmichael, in which he advocates the same views, with respect to the situation of the placenta, and the mode of growth and contraction of the uterus, as he laid before the Profession in the number for January last, and to which I made some objections, in that of the July following. In this he disclaims the construction I have put upon his observations, and endeavours to prove I misrepresented his opinions. To this charge of misrepresentation, I have already had an opportunity of replying in another periodical, in which he published an article, containing certain unwarrantable allegations against the officers of the Dublin Lying-in Hospital, attrib-

Dr. Doherty's further Reply to Mr. H. Carmichael's

ting to them, amongst other things, the answer which bore my name, and an intentional misstatement of his meaning, to serve an invidious purpose. All this I should now willingly pass over, but that he still continues, notwithstanding my solemn denial of the truth of his imputation, to make use of phrases, calculated to convey impressions injurious to those gentlemen. For the want of courtesy shewn myself in disbelieving my statement, and in the studied avoidance of my name, in his late rejoinder, although I have distinctly avowed myself the sole author of the paper in question, I care not; but I do think it material, that a contradiction, the most positive, should be given to the implications contained in such expressions, as "a review from the Britain-street Lying-in Hospital," "his Britain-street Hospital critics," &c. now again repeated. I shall, therefore, quote the declaration I have already published in the periodical alluded to, in order that it may remove from the minds of the readers of this Journal all doubt upon the subject.

Having expressed astonishment at the spirit exhibited by Mr. Carmichael, I thus proceeded: "I now most unhesitatingly and unequivocally pledge myself, as a professional man and a gentleman, that his imputations against the Master of the Lying-in Hospital, and its officers, are totally groundless, (I shall not say *false*, as it is my intention to use the most temperate and in-offensive language;) that the paper written in answer to his, was my own sole and unaided production, and that so far from its being encouraged by the Master of the Hospital, he more than once, in conversation, expressed his ignorance of Mr. Carmichael's views, and objected to my reading it at the Obstetrical Society, lest controversy should excite unpleasant feelings in its dawning efforts. If further proof be necessary, let me add, that I had this morning a distinct assurance from the same gentleman, that up to this moment he has not even read Mr. Carmichael's essay, and is unacquainted with the merits of the discussion between us."

To an ingenuous mind one would have supposed this must

have been conclusive, and prevented any misapprehension as to the source from whence the dissent proceeded. Not so, however, in this instance ; for again is the Lying-in Hospital carped at, and again an attempt is made to involve its functionaries in a strife, which they never dreamt of creating. From what the author can have imbibed his mistaken feelings on this subject, I cannot conceive, unless it be, that in my paper I mentioned the names of the superintendents of that institution, as authorities for some of the points I put forward. But I did so because those points—of many of which (as for instance, the place where the placenta was detected during turning) I could have no other evidence—were published for the purpose of refuting statements, made by him with the greatest confidence, and therefore required to be authenticated. At the same time, however, although, in the capacity of clinical clerk to that establishment, it was my duty to receive from those gentlemen the accounts of the cases I made use of, I again protest, they were not given me with the intention of being turned against any theory whatever ; on the contrary, both the Master and assistants were perfectly ignorant of the application I afterwards made of them, and of my motives in thus minutely investigating those particular circumstances.

I shall not further allude, for the sake of the Profession to which we both belong, to the article inserted in the “ Medical Press ;” and with respect to my replication “ The Philippic,” as he designates it in the paragraph dedicated to its consideration, in the last Number of the Dublin Journal, I shall only say, I think it will be a warning to others, to ponder well, before they venture to commit to print charges against any individual, of unprofessional, nay ungentlemanly conduct. Such a proceeding is little calculated to raise the person who adopts it, in public estimation, much less can it decide a scientific question. But as, with the exception of the words which elicited these remarks, the author has at last undertaken to defend his opinions in a rational manner, I shall proceed, without further comment, to

4 Dr. Doherty's *further Reply to Mr. H. Carmichael's*

renew the, on my part at least, amicable contest, with a hope that my present undertaking may meet from my opponent a more charitable construction.

Throughout the whole discussion, Mr. Carmichael puts prominently forward, as his principal means of defence, that I argued on the supposition of his having stated, if the placenta be situated in any other part of the womb, save the lower and back part, in the first place, its growth cannot correspond with that of the uterus, and in the second, the contractions of labour must produce detachment, with its consequences. This he does, be it remarked, not for the purpose of refuting the argument so made use of by me, or shewing the fallacy of such an inference from his observations, but merely to deny, that such can be found distinctly asserted in his paper. He declares he confined his remarks on its want of coincidence in growth, to the fundus alone, and with respect to the contractions, that he spoke of their effects, only supposing them to take place, as now generally believed. A great discrepancy, however, exists between his original statements, and his present commentary upon them. Instead of alluding to the fundus, or *dome* alone, as the place where the expansion is too great, to allow the placenta to keep pace with it, he expressly affirmed, that if it be situated at any point above the Fallopian tubes, "which are, at the full period of pregnancy, nearly half way down upon the uterine tumour," that is to say, if it be deposited in the upper part of the uterus, both rupture of its adhesions during the increase, and early separation during its decrease, must ensue.*

* As it is important that this point be substantiated, I shall give the whole passage. "The fallopian tubes in the unimpregnated state, are situated at the superior part of the uterus, at the cornua, as they are termed, whereas in the fully gravid state they are nearly one-half down upon the uterine tumour. The superficial distance between them, therefore, anterior, and posteriorly, as well as superiorly, must be the measurement of the expansion it undergoes in this position, and is certainly there much greater than elsewhere. Now if the placenta be situated where such expansion goes on, a change of surface must to a greater or less extent, after some

That to this proposition so laid down, I *did* make an addition, namely, that as these changes in the volume of the organ are, in his opinion, confined to the anterior part, the consequences he has predicated from such alterations, if the placenta be *above* the tubes, must with even more certainty follow, if it be *below* the tubes and *anteriorly*, I candidly admit. But, in truth, it appeared to me so obviously deducible from them, that I fell into the error of thinking it his own opinion on the subject. And I consider I was borne out in doing so, firstly by his positive declaration, that the placenta is always to be found, at the full time, on the posterior wall, and secondly by the following passages.

After describing his mode of expansion, and the contrivance by which the placenta is turned over to the back of the womb, he says: "Thus, throughout gestation, during every moment of which disturbance in the uterus is going on, the placenta is secured from it, and the danger it *otherwise* must be exposed to." And in another place, having asked how it comes to pass, that the placenta is not expelled sometimes for fifteen or twenty minutes after the birth of the child, he adds: "There is but one solution of the question; because the contractions which have affected all the other parts, have not yet influenced the placental department; there can be no other reason."* What meaning, I would ask, should be attached to these, and several similar passages in his paper, but that it was the author's opinion gestation could not proceed favourably, nor labour uncomplicated with detachment, and consequently hæmorrhage, if the placenta were formed in *any place* where it was exposed, as in all other situations, but particularly on the anterior wall, to the

time, be constantly occurring between the two, for it is impossible their growth can go on equally together. * * * Admitting, however, that there should be a perfect freedom from untoward consequences, when the contractions of labour set in, I cannot see how they will not occur, and in the most decided manner." Dub. Jour. for Jan. 1839, p. 453.

* Dublin Journal for last January, pp. 475, 479.

6 Dr. Doherty's *further Reply to Mr. H. Carmichael's*

expansions and contractions of the womb? However, I will allow in this respect I misunderstood him, and shall now proceed to show, that the deduction I have thus drawn is by no means overstrained, but on the contrary, a most easy and natural conclusion from the granted premises, and one which Mr. Carmichael himself is constrained to admit.

In the July Number of this Journal, I entered into a calculation to prove the author's idea, that the placenta can be outgrown by the uterus, even if situated above the Fallopian tubes, to be unfounded. I pointed out that this region increased in *height*, from half an inch, its measurement at the formation of that substance, to five inches, its measurement at the full term, that is to say, in the ratio, in half inches, of one to ten, while the enlargement of the placenta, during the same period, is as one to twelve. This calculation Mr. Carmichael objects to, and confounding what I have said of the increased altitude of this part, with its development in breadth, states the proportion should be one for the newly formed placenta, twelve for it at its full growth, and twenty-two for the fundus at the full period: "so that the fundus increases on the placenta in a proportion, that will be represented by no less a number than ten." In this calculation, however, he is altogether in error, as he has left out of consideration, the *original* breadth of the uterus between the Fallopian tubes. This it must be at once evident, is an essential ingredient in the problem, and I shall, therefore, without further remark, correct this statement.* At the middle of the second month, when the embryo forms its first connexion with the parent, the tubes are two inches asunder: at the close of gestation, they are eleven inches: this part, therefore, expands in the ratio, taken in inches, of from one to five and a half, while the placenta enlarges as one to six at least. Thus then, even in this direction, the latter must outgrow the former.

* The following measurements are taken from casts in Dr. Montgomery's Museum.

But granting for a moment Mr. Carmichael is correct, and the placenta cannot advance *pari passu* with the uterus, if situated above the Fallopian tubes, how much more forcibly will this observation apply to the anterior wall? "The womb," he says, "in its increase, undergoes it chiefly in its altitude, the supply for which, must therefore, come principally from its anterior part. This portion expands and rises up, each superior part of it arriving at, and occupying the fundus, and then turning over to form a portion of the posterior parietes, until the expansion has gone to the required extent." And again, "What then forms the portion of this posterior part superior to it at the [full] time, namely, all that now above the placenta or Fallopian tubes? That which lay anterior to it, when it was the fundus, that is the superior portion of the anterior wall, which, to arrive at its latter position, must have occupied, and passed over the fundus, in the way I have stated."* From these passages, it is evident, that, to estimate aright the degree of increase the anterior wall undergoes according to this theory, we must first measure that part of it below the tubes, at the period of the formation of the mass, and then at the full term, take the length of a line, passing from the centre of the posterior wall, between the tubes, over the fundus, to the anterior labium of the os tincæ. The anterior wall will thus appear to have increased from two inches and three quarters, to seventeen inches, that is to say, in the ratio of one to six one-fifth, which is much more than the greatest development in any direction above the tubes, which I have shewn not to exceed one to five and a half. The placenta, therefore, ought not, according to his view of the subject, to be able to grow equally with this wall of the womb. And this deduction is still further supported by the hint he has lately thrown out, that "some of those cases of abortion, that occur without any assignable cause, at certain periods of gestation, may owe their cause to some such malposition of it." But I

* Dub. Journal for January last, pp. 468-9.

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adduced cases, and shall hereafter give many more, in which it was so situated, and yet gestation proceeded uninterruptedly, from which I infer *that his theory is not correct.*

This may be taking the author "in a way never intended by him," but I submit it is a fair view of the question, and a rational argument. Nor has he any just grounds of complaint against it. Surely, when he asserts, that the foregoing ill consequences must result, if the placenta be affixed in a situation, where a determined amount of expansion goes on, "whether the expansion takes place according to the present theory, or that he now proposes," he must *a fortiori* admit, that a similar injurious result will follow, if it be situated where a much greater change is effected.

What I have stated with respect to the expansion, applies with still stronger force to the contractions of the organ, supposing them to be "in an inverse ratio to each other." This argument also, Mr. Carmichael considers unfair, as he spoke of the placenta only in two situations, namely, on the back and fundus of the womb. I am aware he only mentioned those positions, nay, one of my strongest objections to his paper is, that not only does he pass over unnoticed the possibility of it being ever otherwise disposed, but positively asserts it is invariably on the posterior wall. He forgets, however, he made such a statement as the following. "In what possible way can we account for the uterine contractions taking place, up to almost the very last act of labour, *without the circulations being impeded*, which are so essential to the life of the child? clearly, on the grounds alone, that the part where the placenta is attached, the back of the womb, not only is not submitted to these contractions during the labour, until after the birth of the child, but is likewise by some means preserved from the effects *which the contractions in other parts would have on it*, [compression,] without some such means being in operation."* We must also recollect that he

* Dub. Journal, January Number, p. 473.

gives cases of hæmorrhage, which he refers alone to the placenta being situated rather high on the posterior wall, where similar "rectilinear contractions" as on the anterior occur, but with double force. I do, therefore, again assert, that, according to Mr. Carmichael's positions, hæmorrhage and a still-birth must result, if the placenta be situated in *any other part* of the uterus, than low down on the posterior wall.

Nor is such a statement calculated "to exhibit a writer on midwifery in a ridiculous point of view." If indeed he had admitted, that the placenta may be attached to *any* point of the uterine surface, and had stated, or I had made him state, that hæmorrhage should follow from every position but the one, *then* his theory would have been so refuted by every day's experience, as to deserve being ridiculed, instead of being met by serious argument. But as he assigned to it only one place, unless in rare instances, however incorrect he may have been in doing so, (and his soreness on this point, I have raised, shows he is not yet satisfied in his mind, that the anterior position *is* a very unusual one,) he might without any absurdity have asserted, all other arrangements gave rise to hæmorrhage: in fact I have demonstrated, that to be in keeping with himself he *should* have done so. But the cases I published, according to his own admission, and others I shall hereafter give, prove such a consequence (though a necessary one according to his views) does *not* follow from what he considers an unnatural disposition, from which also I infer *that his theory is not correct*.

Nor will I even admit I misinterpreted him, as to the period at which hæmorrhage should under these circumstances occur. Having been pointed out the dilemma into which he had fallen, he now attempts to get over the difficulty, by assuring his readers he never meant hæmorrhage while the child is in utero. In answer, I shall just refer to the following passage. "I have further stated my reasons for supposing, as the contractions of the womb necessary for the expulsion of the child, appear to be confined to the superior and anterior part,

that when the placenta is situated above its usual position on the lower part of the back of the uterus, it comes within the range of *those early contractions*, and is thus partially detached with the consequences thereof; in fact, labours complicated with hæmorrhage may possibly be the result of such partial malposition, and I am of opinion, that future experience will prove the correctness of this statement.”* If this observation does not apply to hæmorrhage, whilst the child is still in the womb,—a meaning which the author now labours to disclaim,—I know not the signification of words. And if it be not so, what, let me ask, is the value of his new motion, or when does he intend the patient to be thereby saved from hæmorrhage? Perhaps he means during the separation of the after-birth. But as the action, which begins to detach it, however performed, will, by continuing, separate it completely, (at least I can see nothing to prevent it,) why should more loss be sustained? The only bearing his argument seems now to have, since the former statement has been indignantly disowned, is, that if the placenta be situated within the region, which he has set apart for expulsive action, it will be earlier detached, and with more hæmorrhage than elsewhere, a fact, which does not correspond with my experience, as shewn by the subsequent table, from which also I argue *that his theory is not correct*.

Having now occupied sufficient space in support of my original review of his opinions, I shall proceed to take the author on his present shewing, for it is by no means my wish to force his meaning, and prove both his premises and conclusions incorrect. He sets out with two propositions, with both of which I totally disagree. On these his mode of expansion and contraction of the uterus is founded, and from these he infers a necessity for such an explanation, and the impossibility of any other being the true one. “If the premises I have assumed be correct and admitted,—firstly, that the placenta is formed and attached at the fundus, or somewhere near it; secondly, that it

* Dub. Journal for January, 1839, p. 477.

remains, throughout pregnancy, on the same identical portion of the womb it was first attached to; and lastly, that at the close of gestation, it is low down on the posterior part of it, I cannot see in what other manner we can account for this change of position.”*

Now, with respect to its early attachment, I know not upon what he founds his opinion, but that it is erroneous, references to preparations and plates will fully prove. If we examine an ovum after the middle of the second month, it will be found that the cord, from which the placenta springs, is inserted, not into its roof, if I may so call it, but into some part of its walls, at a higher or lower elevation. Many representations of this arrangement are to be seen in Velpeau's and in Davis's † plates. I would particularly direct attention to Granville's Illustrations of Abortion, (page 9,) where two specimens of miscarriage between the second and third month, are delineated and described. In the one, “the placental cotyledons are at the *posterior* part of the figure, mossy, in groups, and some of them covered with their membrana proper.” In the other, “the connexion to the inner cavity of the womb is accomplished by means of the placenta, which is seen at the *posterior* part of the preparation, and appears quite compact, and one-twentieth of an inch thick.” This is also well displayed in several preparations in Dr. Montgomery's Museum, particularly in that marked 251, an abortion at the tenth week, in which the placental rudiments are altogether confined to the *back* of the ovum. In fact, few instances can be pointed out, where the foetus hangs from that portion which corresponds to the fundus uteri. If now we look into the authorities on the subject, instead of such a statement being made, they one and all inform us, that the embryo may connect itself to any part of the uterus. Even Burns himself, who most inclines to Mr. Carmichael's position, has this pas-

* Dub. Jour. for Jan. 1839, p. 469.

† Prin. and Pract. of Obst. Med. plate 28, p. 840.

sage. "The placenta *may be formed at any part of the uterus*, but in general it is found near the fundus."* The opinion of the latest writer is as follows. "*For the most part the ovule attaches itself to the naked surface of the womb, in the vicinity of the orifice of the Fallopian tube*, through which it entered; but it certainly does, in a good many instances, move to the fundus, or to the anterior or posterior surface of the organ, or it may even fall downwards into the vicinity of the upper opening of the cervix and attach itself there."† From these evidences it will be seen, how much reliance should be placed on Mr. Carmichael's assertion, that it is an admitted fact, the placenta always first attaches itself to the fundus. This "admitted fact" depends, as far as I can see, on his own testimony alone, and cannot be received without a considerable degree of reservation.

But he asks, how can the placenta be found low down on the posterior wall, if the expansion does not take place as he describes? Nothing more easy to explain. The place at which the embryo attaches itself, I have in my former paper endeavoured to show, depends in a great measure on two circumstances, the greater or less obliquity of the uterus at this period, and the quantity of fluid it contains. To these I have added the degree in which the decidua reflexa yields, or rather grows before the ovum. If that membrane be rapid in its growth, or perhaps of such tenuity, as to allow the weight of the ovum to prolong it to an unusual extent, that substance arrives in the lower region of the uterus, before the embryo forms an attachment to it, (and this is facilitated by the length of time which elapses from its arrival, till it forms its connexion,) and accordingly, in the lower region of the uterus, will its attachment be found at a later period. No necessity exists for entertaining, on the one hand, the absurd supposition, that the placenta can shift its adhesions

* Princ. of Midwifery, p. 201. London, 1832.

† Philadelphia Practice of Midwifery, by Chas. D. Meigs, M.D. Philadelphia, 1838, p. 102.

to the uterine surface, or on the other, that the expansion of the womb is confined to any one part. Wherever the placenta forms, there it grows, and there throughout intra-uterine life will it remain, whether it be on the posterior wall, or on the anterior, or (in much rarer cases) on the fundus. But it may be inquired, why should the fundal position be so unusual a one? The reason, I think, is obvious. The ovum enters the womb *below* the fundus, and the foetus, to connect itself to it, should send its vessels, not only upwards against gravitation, but from the natural obliquity of the organ, somewhat forwards too. And it appears to me rational to suppose, it is only, when from some extraneous cause the womb is maintained in an upright position, so that the germ is pressed or supported directly against it by the fluids, which the uterine cavity then contains, it can shoot its vessels into this particular part. At least, it seems to me a plausible explanation of the infrequency of its attachment there, that to arrive at it, the vessels under any other circumstances must proceed not only against gravity, but with an exactness of lateral inclination, which one may well imagine difficult to attain. So much for the formation of the mass, the first chain in Mr. Carmichael's argument, the fallacy of which affords me an additional reason for considering *that his theory is not correct.*

Let us now turn to his opinion, with respect to its situation at the termination of gestation, and contrast it with those to be found in the standard works of the day, and here, I think, we shall again see, that he stands alone in opposition to an array of the highest authorities, and brightest luminaries of our Profession.

The author states; "I have adduced proofs sufficient to satisfy most minds, that at the close of pregnancy, the placenta is low down on the posterior part of the womb."* More recently he adds: "I believe, since the appearance of my essay, atten-

* Dublin Journal of Medical Science for January, 1839, p. 467.

tion has been very much drawn to the examination of the secundines; and I believe, I need not observe what tale they (I shall not say in every instance) tell, inasmuch as one or two exceptions may be found in the hundred; but for those who cavil with my doctrines, let them, if they can, deny this assertion, as to the proportion of instances, in which it is found low down on the posterior wall, and if they be forced to admit it, or what is the same thing, be silent on it from an unwillingness to admit it, let them say, either that Nature has no object in thus almost so invariably placing the placenta in that situation, 'or if she had, let them give a better solution of it than I did.'* Here then is a distinct and regular challenge, in words which cannot be mistaken. Upon this point, I join issue with Mr. Carmichael, and if I do not prove to demonstration, that this, his strong assertion, is devoid of foundation, I shall be satisfied that his theory be received, and I overwhelmed with all the odium of persisting in an opposition, which is "both frivolous and vexatious." I shall first quote passages from the most distinguished writers, and then give, in a statistical form, my own researches on the subject.

"It is seldom found attached to the same part of the uterus in two successive births, and though it most frequently adheres to the *anterior* part, it is occasionally fixed to any other, even to the os uteri."—Denman.† "There is no particular part of the uterus, to which Nature seems constantly and uniformly to fix the placenta."—Rigby.‡ "I believe the placenta is most frequently connected to the back part of the body of the uterus, *rather above its centre*; but there is no one spot of the whole internal surface of the womb to which it may not be appended."—Ramsbotham.§ The situation of the placenta is generally in the *upper part* of the uterus, either in front or laterally

* Dublin Journal of Medical Science for November last, p. 217.

† Introduction to Midwifery, p. 116. Lond. 1824.

‡ Essay on Uterine Hæmorrhage, p. 13. Lond. 1822.

§ London Medical Gazette, vol. xiii. p. 615.

behind.”—Blundell.* “The attachment of the placenta is not invariable; it may unite itself to any point of the internal surface of the womb.”—Gardien.† “The placenta may be situated on any part of the uterine surface. It may be found upon the fundus, on one of the Fallopian orifices, on the bas-fond, in front, on either side, or upon the inner os uteri.”—Meigs.‡ Dr. Lee states, that it is generally attached to the posterior and lateral parts of the fundus and body of the uterus. According to Maygrier, it occupies oftenest the *middle* and posterior part of the womb, and more rarely the fundus.§ “The placenta does not always adhere to the same part of the uterus, in general it connects itself to the *superior* part of the womb.”—Davis.|| Thus, not one of these authors corresponds with Mr. Carmichael in the position he has allotted it; but lest he should object that these opinions were formed on the evidence afforded by the introduction of the hand, after the expulsion of the child, when he fancies it has undergone a change in its relative situation, Velpeau comes seasonably to my aid, with the result of the inspection of thirty-four cases, who died during pregnancy, or recently delivered: in twenty instances, the placenta was found over the orifice of the Fallopian tube, in three placed anteriorly; in two posteriorly; in six at the fundus, and in three towards the cervix, at the side just beneath the tube.¶ My friend, Dr. Edward W. Murphy, has informed me of a woman, who died of phthisis, undelivered at the eighth month, to whom he was called while Assistant Physician to the Lying-in Hospital, for the purpose of extracting the child. On performing the Cæsarean section, the placenta was found adhering to the left side of the fundus. In Dr. Montgomery’s Museum, is a gravid uterus at the full term, in which the pla-

* Lectures, p. 224.

† *Traité Complet d’Accouchemens*, tome deuxième, p. 162. Paris, 1824.

‡ Opt. Cit. p. 118.

§ Tom. i. p. 143.

¶ *Prin. and Pract. of Obstetric Med.* vol. ii. p. 835. Lond. 1836.

¶ *Embryologie*, p. 69. Paris, 1835.

centa may be seen on the upper and anterior part of the womb. The preparation marked B, a. 1. in Dr. Kennedy's Museum, also exhibits a gravid uterus with its contents at the full time. The anterior wall has been divided, and the placenta is seen partially detached from it. Against all this evidence, Mr. Carmichael sets his *four* cases of deaths before delivery, wherein the placenta was low down on the posterior wall. Therefore, forsooth, this must be its natural position, and all other observers are in error!!

But he tells us the stethoscope, in ninety-eight cases out of a hundred, testifies, that this is its situation. What is Kilian's observation on this subject? "On ausculting the different parts of an abdomen, which is distended by the gravid uterus, two species of pulsation will be distinguished: they are essentially different from each other, and are heard at different parts of the abdomen. In the first place, we shall hear, about the middle of the gravid uterus, a little to one side, and generally the left, distinct double pulsations, which follow each other very rapidly, and are mostly, although not always, in perfect rhythm, and secondly, *in various parts of the uterus, but most distinctly towards the fundus*, and especially on the left, we shall also perceive very audible single pulsations, accompanied with a peculiar tone or murmur. The first sound is from the pulsations of the foetal heart, the second is from the murmur of the circulation through the gravid uterus."* Hohl, speaking of the placental bruit, says: "This sound is only heard in the gravid uterus, and may be perceived in most parts of the *anterior wall*; it is most distinct at those spots, where the vessels have undergone the greatest increase of size, and degree of contortion, viz. *about the fundus*, and especially at its sides."† Naegelé states, that the *souffle* may always be heard in one or both inguinal regions. "From this part it usually extends, although mostly on one

* British and For. Med. Review, vol. i. p. 89.

† British and For. Rev. v. i. p. 90.

side, towards the hypochondrium, or more forwards towards the umbilicus, and the limits within which it can be heard cannot be marked very exactly. In the majority of cases, they at any rate correspond to the circumference of the placenta; in some, it extends from both groins over the whole uterus; in others, it is more confined to the lower portion—*there is no part of the uterus*, which can be reached by the stethoscope, in which we have not heard it.”*

All this weight of authority Mr. Carmichael passes by, as if unworthy of notice, and without alluding to any writer on the subject, even for the purpose of contradicting him, pronounces *ex cathedra* his *ipse dixit*, that it is in one of the iliac fossæ the sound is always detected by the stethoscope, shewing that “there the placenta is always in its immediate vicinity, nay immediately under it.”† I shall hereafter point out, that the murmur being heard in this situation, is not necessarily an indication of the situation of the placenta. But I forget, that since my cases were published, he has had the ingenuousness to own himself in error, in this particular, and admit that in *one* instance, the uterine bruit was heard at the fundus. I cannot but feel grateful for the candour he exhibits, in believing my statement on this occasion, particularly as he refused to credit my solemn declaration on one of more importance: but I shall here now, once for all, reply to his boast, that several months were consumed in seeking out cases to controvert his opinions, and after all, only the few I related could be obtained. This is not at all the fact. In no place have I stated these to have been the only ones I met with; on the contrary, I have elsewhere informed the author, I could adduce several similar in addition, a pledge I shall just now redeem. But having recorded cases, which he himself has since allowed were sufficient to support my objections to his argu-

* British and For. Rev. vol. xvi. p. 866. See also Dr. West's Translation of *Nægelé's Treatise on Obstetric Auscultation*, p. 14. Lond. 1839.

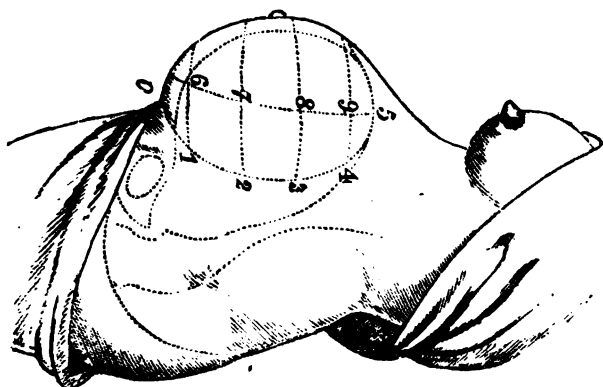
† Dublin Journal for January, 1839, p. 461.

ments, I was satisfied with doing so, without lengthening the paper by others, which probably would have been looked upon as unnecessary and tedious. This is a sufficient answer to this oft repeated, and loudly vaunted charge.

I have now to lay before the Profession, my researches on the position of the placenta, tested by the stethoscope, by actual measurement of the secundines, and in a few instances, by the introduction of the hand. I have been induced, in order to set all argument at rest on this score, to make a statistical table of one hundred cases, most of which occurred in the wards of the Dublin Lying-in Hospital. In order that reliance may be placed on my account of the stethoscopic phenomena, I may be permitted to observe, that in that institution I had, before the commencement of these observations, long and ample opportunities, of which I fully availed myself, of becoming familiar with the use of the instrument in obstetric practice. The table exhibits firstly, the name of the patient, and date of her admission; secondly, the evidences afforded of the position of the placenta, by auscultation; thirdly, the dimensions of the placenta and membranes; fourthly, the period at which the secundines were thrown off; and fifthly, the insertion of the cord. And in notes appended, I have stated any thing remarkable that may have occurred in the progress of the labour. In describing the extent of the souffle, I have adopted for the sake of brevity, the accompanying diagram. Thus, if I wish to express that it was heard along the edge of the uterus in the groin, I say it was audible in 0; if that it reached from that to the highest point of the lateral edge, I say it was heard from 1 to 4. When I wish to point out the part of the anterior wall it could be distinguished in, I note that it was heard in 6, for instance, or from 1 to the median line, as the case may be. The letters R and L stand for right and left sides.

The following cases were taken indiscriminately, and without reference to any particular circumstance connected with them, from amongst the many which were admitted into the

Dublin Lying-in Hospital during the period embraced in these reports, according as I had an opportunity of examining them with the stethoscope previous to the completion of labour, and afterwards of inspecting the secundines.



In examining for the souffle, I may beforehand remark, that when it is audible only along the margin of the uterus, the placenta is invariably placed on the posterior wall; and as it generally approaches one side more than the other, the side it is nearer to will be that, at which the murmur is loudest and most extensive, at the other side it will probably be heard not at all, or over a small space only, (unless when the placenta is large, in comparison with the uterus), where the wall forms, as it were, a tangent to the circle. In the following cases, it may be observed, that though it was generally detected in one or both iliac fossæ, the placenta in several was situated at a much higher point. The fact is, a souffle almost always exists here, arising from the disposition of the vessels of the uterus, but it is feeble, and wants the prolonged bellows sound, unless the edge of the placenta reaches this region, when it will be even louder here, than under other circumstances, it is in any other part of the tumour; so much so, that I have then often persuaded myself, I could

even distinguish from the whizz a rush as of the blood, synchronous with the pulse. When the bruit can in the least be detected at any point of the anterior wall, we may rest assured the placenta is applied to it. However, it should be recollected, that though the placenta be so affixed, we may remain ignorant of the fact, unless we examine twice or three times; for strange to say, the murmur often ceases for a while, (sometimes even at the edges of the mass, but frequently over its substance), and after an uncertain interval returns in full force. When it can only be heard over a part of the anterior wall, it shows the placenta is wrapped round that side of the uterus. These observations will, perhaps, be sufficient to render this table intelligible. I shall, at a future time, take an opportunity of entering more fully into its consideration.

The evidence afforded by the secundines is founded on the fact of the placenta, in the majority of instances, being expelled with the membranes reversed, and its foetal surface downwards. When this is the case, it is obvious, the upper edge must, in its separation, have been momentarily earlier than the lower, and thrown towards the wall opposite that on which the mass was implanted; a direction the membranes, which usually remain longer adherent, tend still further to give it. But as the membranes arising from the upper edge pass over the fundus, and down the opposite wall to the os tincæ, they must be much longer than at the inferior edge, and the length of the latter will shew, how far from the os the placenta was actually situated. As this, however, will not be sufficient to tell us to what wall it was appended, I adopt the expedient of inserting a pin (as it lies on the bed fully expelled) into the margin close to the patient's thigh. Thus I am able to distinguish the anterior from the posterior part, when removed for examination, a point, which I shall afterwards shew, Mr. Carmichael must altogether have neglected. Recollecting now, that the upper edge is thrown towards the opposite wall, it must be evident, if the long membrane be found at the pubal margin, the placenta must have

been on the posterior wall ; if at the perinæal, on the anterior. The same will hold good with respect to the lateral parietes. But, frequently, the membranes, being early detached,* come down in their natural relation, unreversed, or only one-half inverted ; still I have satisfied myself, the separation of the placenta, in by far the greatest proportion of cases, takes place from above downwards, which indeed is proved by the fact, that the foetal surface is still the first to make its appearance. In a very few, the uterine surface is first seen, and then it follows, the secundines will tell an exactly opposite tale to what they ought. For instance, if the placenta be on the posterior wall, and the lower edge is first or simultaneously detached, it may be directed by the perinæum towards the pubis ; and the short membrane will then be there found, after it is expelled. This error, however, can be easily guarded against, by watching which surface descends foremost, or in other words, which remains directed towards the vulva : indeed, it is principally, I might almost say only, when it has been on the posterior wall, and con-

* Denman notices, that the placenta mostly descends with the membranes reversed, and adds : " Yet not always, as the separation of the placenta is in some cases so speedy, that it drops into the vagina, and pushes the membranes before it." I perfectly agree as to the fact, but I think the explanation erroneous, as if the placenta be first detached, it has to peel the membranes from the uterus, and must therefore invert them. About fourteen months ago, a curious case of preternatural adhesion of the membranes occurred in the Hospital. The child was born alive, after a natural labour of two hours. The placenta being retained for one hour, and hæmorrhage coming on, pressure was made on the uterus, and the placenta expelled, but the funis was found to remain at its central part in the cavity of the uterus, while both its extremities were without the labia. On looking at the placenta, the foetal surface was found stripped of the transparent membranes, which the finger being passed detected still adhering to the internal surface of the uterus. They were then removed by the introduction of the hand. Examination of the whole of the secundines revealed a very unusual condition. The chorion, which was throughout thicker than natural, had here and there, projecting from its surface, small vascular substances, resembling the placentulæ of the cow. The funis played in a pulley, formed by the membranes in the situation corresponding to the former position of the placenta.

sequently had the perinæum to slide along, I have observed it so detruded. If the membranes be of equal length, or nearly so all round, the placenta was of course on the fundus.

For example sake, I shall take the first case, that of O'Connor. Here the souffle is noted, as being audible from 1 to 4 R, that is to say, it was heard from the inferior spine of the right ilium, along that edge of the uterus to the commencement of the fundus, and no where else. The prognosis made, therefore, was that the placenta was attached to the middle of the posterior wall at the right side, and this was verified by the membranes, which were three inches long at the perinæal or posterior margin, and ten at the opposite edge. In the third case, that of Rooney, almost similar observations were made, and their correctness proved by the introduction of the hand, which found the placenta still adhering to the upper and back part of the womb. In the case of Reilly, (No. 11,) on the contrary, the souffle was not only heard from 1 to 3 R, but at 6 and 7, or half way towards the median line: thus pointing out that the placenta was low down on the right side of the uterus, and extended to some distance anteriorly. And the membranes confirmed the fact, by being two inches on the anterior and right side, and twelve and a half in the opposite directions.

TABLE
Demonstrating the Position of the Placenta.

Number.	Date.	Name.	Placental Souffle where heard.	Prognosis of Situation of Placenta.	Measure-ment of Membranes.	Diameters of Placenta.	When expelled.	Insertion of the Cord.
1	Sept. 17	O'Connor.	1 to 4 R.	Middle of post. wall.	3 in. post. 10 in. ant.	6½ inches.	1 h.	Within 2 in. of ant. edge at its centre.
* 2	" 17	Glover.	At 5, 4, 3, both sides, and across abdomen between them; no souffle in iliac fossæ.	On fundus reaching to both an. and post. walls.	8 in. post. 7 in. ant.	7 in. ant. post. 6 in. laterally.	1½ h.	Centre.

* Labour lasted three hours; child alive, no hæmorrhage.

Number.	Date.	Name.	Placental Souffle where heard.	Prognosis of Situation of Placenta.	Measure-ment of Membranes.	Diameters of Placenta.	When ex-pelled.	Insertion of the Cord.
3	Sept. 17	Rooney.	1 to 5 R. at 3 L.	High on post. wall.	Membranes torn. Hand introduced.	7 in.	..	Centre.
4	" 17	Canning.	2 to 5 R.	High on post. wall.	5 in. post. 9 in. ant.	6 in.	15 m.	Rather nearer ant. edge, than centre.
5	" 16	Ward.	1 to 4 both sides.	Middle of post. wall.	3 in. post. 13 in. ant.	7 in. ant. p. 7½ laterally.	1 h.	Centre.
6	" 18	Dickinson.	0 to 3 R.	Low on post. wall.	1½ in. post. 13 in. ant.	6 in. a. p. 6½ laterally.	5 m.	Within ½ in. of ant. edge, centre.
7	" 18	Meredith.	1 to 4 L.	Middle of post. wall.	4 in. post. 10 in. ant.	7 in.	11 m.	Centre.
† 8	" 18	Whelan.	No time for examination after admission.	Membranes proved it to have been on fundus.	2½ in. post. 9 in. ant.	6 in.	2 h.	Centre.
9	" 18	Smyth.	1 to 4 both sides.	Low on post. wall.	1½ in. post. 14 in. ant.	7 in. a. p. 6 in. lat.	..	Within 1 in. of ant. edge, centre.
10	" 19	Conolly.	2 to 3 both sides.	Middle of post. wall.	3 in. post. ant. torn.	6 in.	17 m.	Within 1½ in. of ant. edge, centre.
11	" 20	Reilly.	1 to 3 R. and at 6, 7, R.	Right side extending to ant. wall.	12½ in. post. 3 in. ant. and R.	6 in.	30 m.	Within 1 in. of post. edge, L. side.
12	" 20	Hanlon.	1 to 3 L.	Low on post. wall.	3 in. post. 11 in. ant.	6 ant. p. 7 lat.	5 m.	Within ½ in. of ant. edge, centre.
13	" 20	Wheeler.	Loud at 1 to 3 and 6, 7 L. feeb. 1 to 2 R.	Low on left side and ant.	14 in. post. 1½ in. ant. and L.	6½ ant. p. 5½ lat.	10 m.	1 in. nearer ant. edge than centre.
14	" 20	Walsh.	1 to 4 R. 1 to 4 and at 7 L.	Middle of post. wall, extending to ant. at left.	2½ in. post. 6½ in. L. 8 in. ant. 8 in. R.	7 in.	10 m.	Right cord close to ant. edge at R. Left cord separated on the membranes close to ant. edge.
15	" 20	Kellett.	1 to 4 L. 1 to 3 R. and across abdomen. Loud at umbilicus.	On anterior wall.	11½ in. post. 1½ in. ant.	7 ant. post. 6½ laterally.	5 m.	Close to post. edge on left side.
16	" 20	Dooley.	1 to 3 L.	Low on post. wall.	2½ in. post. 9 in. ant.	7 in.	30 m.	½ in. nearer ant. edge than centre.

* Lever case, hæmorrhage before the expulsion of placenta, hand introduced, placenta found on upper part of posterior wall.

† Labour lasted fourteen hours, placenta retained two hours, removed by pressure without hæmorrhage. Child alive.

‡ Forceps case.

§ In this case it is evident that the feeble souffle heard from 1 to 2 R. did not depend on the position of the placenta, but on the uterine vessels.

|| Twins at the eighth month. Single placenta.

Number.	Date.	Name.	Placental Souffle where heard.	Prognosis of Situation of Placenta.	Measure-ment of Membranes.	Diameters of Placenta.	When ex-pelled.	Insertion of the Cord.
17	Sept. 20	Byrne.	in 2 R. 0 to 3 L.	On posterior wall.	4 in. post. 10 in. ant.	5 in. an. p. 6 in. lat.	30 m.	Close to ant. edge, centre.
18	" 21	Cunnive.	2 to 4 R. 3 to 4 and 8 L.	High on ant. wall.	10 in. post. 4 in. ant.	6½ in.	2 h.	Opposite centre close to right edge.
19	" 24	Hix.	1 to 4 both sides.	On posterior wall.	8 in. post. 10 in. ant.	6½ an. p. 7 lat.	1 h.	Centre.
20	" 24	Morris.	No time for examination.	Membranes proved it on ant. wall.	11 in. post. 9½ in. a. ant.	7 in.	2 h.	Nearer post. edge than centre.
21	" 26	Mellis.	0 to 3 R.	Low on post. wall.	8 in. post. 11 in. ant.	7 in.	10 m.	Close to ant. edge at centre.
22	" 26	Keegan.	1 to 3 both sides loud.	Low on post. wall.	2 in. post. 10 in. ant.	8 in. an. p. 7 in. lat.	15 m.	Centre.
23	" 26	Dunn.	1 to 4 both sides.	Posterior wall.	4 in. post. 9 in. ant.	7 in.	45 m.	Right close to anterior edge. Left at centre.
24	" 26	Rochford.	2 to 4 and 7 L. 3 and 8 R. loud at umbilicus.	Anterior wall.	12½ in. post. ant. torn.	7 in.	15 m.	Centre.
25	" 26	Marlow.	2 to 4 L.	Posterior wall.	1½ in. post. 12 in. n. t.	7 in.	1 h. 5 m.	Centre.
26	" 27	Vickery.	in 1 L. only.	Posterior wall.	2½ in. post. 11 in. ant.	7 in.	8 m.	Centre.
27	" 26	M'Donald.	No examination.	Hand introduced: plac. on ant. wall.	11 in. post. 4 in. ant.	7 in.	Im-me-diate-ly.	Nearer post. edge than centre.
28	" 27	Reilly.	"	Membranes showed it to have been on fundus.	9 in. post. 8½ in. ant.	6 in.	2 h.	Centre.
29	Oct. 2	Glennon.	1 to 4 L. and to med. line.	Ant. wall left side.	6 in. post. 2 in. ant. and L.	6 in.	35 m.	Nearer ant. edge than centre.
30	" 3	Jones.	1 to 4 L. 1 to 3 lt.	On posterior wall.	2 in. post. 12 in. ant.	6 in.	10 m.	Centre.
31	" 6	Fagan.	1 to 4 both sides.	On posterior wall.	1 in. post. 13 in. ant.	7 in.	15 m.	Nearer ant. edge than centre.

* Twins at seventh month.

† Ruptured uterus: delivered with the crotchet. Placenta brought away by the hand. Found adhering to anterior wall.

‡ Labour lasted five hours. Child born alive. No hæmorrhage. Deposit of lymph between the membranes and placenta, a quarter of an inch thick, in a circular form around the cord, at the distance of an inch and a half. I regret much not having had an opportunity of examining this woman with the stethoscope. The pupil on duty reported the souffle to have been heard all over the abdomen.

§ An hour after delivery, some hæmorrhage, hour glass contraction, part of placenta protruding through it. The hand being introduced, the placenta was found still attached to the fundus and anterior wall.

Number.	Date.	Name.	Placental Souffle where heard.	Prognosis of Situation of Placenta.	Measure-ment of Membranes.	Diameters of Placenta.	When ex-pelled	Insertion of the Cord.
22	Sept. 6	Woogan.	1 to 4 and at 6, 7, 8, R. feebly 3 L.	Right side of uterus and anteriorly.	10 in. post. and L. 3 in. ant. and R.	7 in.	10 m.	Within 1 in. of posterior edge.
23	" 6	Costello.	1 to 2 L.	On posterior wall.	12 in. post. 3 in. ant. uterine surface downwards.	6 in.	50 m.	Nearer post. edge than centre.
24	Oct. 6	Barrett.	3 to 4 R.	On post. wall.	4 in. post. 10 in. ant.	7 inches.	25 m.	Near anterior edge.
25	" 6	Dingle.	1 to 3 L.	On post. wall.	3 in. post. 10 in. ant.	6 inches.	3 h.	Within 1 in. of ant. edge at centre.
26	" 6	Rafter.	1 to 3 L. and at 6, 7, L.	On ant. wall and left side.	12 in. post. 3 in. ant. and L.	6 inches.	4 m.	Nearer post. edge than centre.
27	" 8	Donaghan	1 to 3 both sides.	On post. wall.	3 in. post. 10 in. ant.	Placenta triangular, 7 inches long, base below 3 inches.	30 m.	Centre.
28	" 11	Nolan.	In 0 R. and 1 to 4 L.	On post. wall.	Introduc-tion of hand to remove placenta.	6 in.	3 h.	Centre.
29	" 12	Kavenagh	1 to 3 both sides and across abdomen.	On ant. wall.	7 in. post. 1½ in. ant.	5 in.	Im-mediate-ly.	Centre.
30	" 12	Doyle.	1 to 4 R. 3 to 4 L. and across abdomen.	On ant. wall.	12 in. post. 3 in. ant.	7 in.	10 m.	Near anterior edge.
31	" 12	Clarry.	1 to 3 R. feebly, 3 to 4 R. loudly.	On post. wall.	3 in. post. 10 in. ant.	6 in.	50 m.	Near poste-rior edge.
32	" 12	Dignam.	1 to 4, and at 6, 7, 8, L.	On ant. wall left side.	Post. torn, 3 in. ant. and L.	7 in.	Im-mediate-ly.	Centre.
33	" 13	M'Evoy.	0 to 4, and at 6, 7, 8, L. feebly at 1 R.	Left side and ant.	12 in. post. ½ in. ant. and L.	7 in.	1 h.	Centre.
34	" 13	Shaw.	0 to 3 both sides and across abdomen.	On ant. wall.	Post. torn, ½ in. ant.	7 in.	5 m.	Centre.
35	" 13	Reilly.	1 to 4 L. and to median line.	Left side and ant.	12 in. post. 3 in. ant. and L.	5 in.	1½ h.	Centre.

* Placenta removed by pressure.

† Tedious labour succeeded by spasmodic action; pressure failed to bring away placenta; slight hæmorrhage; hand introduced; about two inches of placenta adhered firmly to posterior and superior part of the uterus; child still-born and putrid.

‡ Some hæmorrhage after expulsion of placenta, checked by ergot.

26 Dr. Doherty's further Reply to Mr. H. Carmichael's

Number.	Date.	Name.	Placental Souffle where heard.	Prognosis of situation of Placenta.	Measure-ment of Membranes.	Diameter of Placenta.	When ex-pelled.	Insertion of the Cord.
*46	Oct. 13	Brown.	2 to 3 R. and at 3 L.	On post. wall.	3 in. post. ant. torn.	7 in.	3 h.	Centre.
*47	" 14	Lynch.	0 to 3 L. 0 to 3 R.	On post. wall.	3 in. post. 12 in. ant.	6 in.	3 h.	Centre.
†48	" 14	Burke.	At 1 both sides and across.	On ant. wall.	6 in. post. ant. wanting.	4 in.	18 m.	Centre.
49	" 15	Shannon.	1 to 3 L.	On post. wall.	4 in. post. 14 in. ant.	6½ in.	1½ h.	Near anterior edge.
‡50	" 17	Newery.	0 to 3 both sides and across abdomen.	On ant. wall.	12 in. post. ant. wanting.	7 in.	20 m.	½ in. from centre nearer p. edge.
51	" 18	Bradley.	Feebly from 1 to 3 both sides. Loud 3 to 4 both sides and across between them.	High on ant. wall.	12 in. post. 4 in. ant.	7 in.	20 m.	Opposite centre at right side.
52	" 18	Parker.	1 to 3 both sides and across abdomen.	On anterior wall.	12 in. post. ant. wanting.	7 in.	10 m.	Opposite centre at right side.
53	" 19	Scott.	0 to 4 L. and to median line; feebly in 0 R.	On left side and anteriorly.	10 in. post. 2 in. ant. and L.	7 in.	30 m.	Centre.
54	" 19	Murphy.	3 to 4 both sides and across ant. wall.	On anterior wall.	14 in. post. 1½ ant.	7 in.	30 m.	Opposite centre at right side.
55	" 19	Tracey.	1 to 4 both sides and across abdomen.	On anterior wall.	12 in. post. 2 in. ant.	6½ in.	12 m.	Centre.
56	" 19	Murray.	1 to 4 R. and to median line.	On right side and anteriorly.	12 in. post. 2 in. ant. and R.	4 in. ant. post. 7 in. laterally.	10 m.	Centre.
‡57	" 19	Kelly.	1 to 4 both sides, loudest in 4 R.	High on posterior wall.	4 in. post. ant. torn.	7 in.	5 m.	Centre.
58	" 19	McCor-mick.	Loud 0 to 3 and at 6 L. Feeble at 0 to 3 R.	Left side and anteriorly.	12 in. post. 1 in. ant. and L.	7 in.	5 m.	Within 1 in. of posterior edge.
59	" 21	Eltrington.	0 to 3 R. 1 to 4 L. Loudest 2 to 4.	High on Posterior wall.	4 in. post. 10 in. ant.	7 in. ant. post. 7 in. laterally.	3 m.	Centre.

* Placenta removed by pressure.

† Partial placenta presentation at the sixth month. Rupture of the membranes sufficed.

‡ Placenta partially exposed by the dilatation of the os in its last stage. Head, hand, and funis presented; turning resorted to; child saved.

§ Long forceps case.

Number.	Date.	Name.	Placental Surface where heard.	Prognosis of Situation of Placenta.	Measure-ment of Membranes.	Diameters of Placenta.	When expelled.	Insertion of the Cord.
60	Oct. 22	Slane.	0 to 4 and at 6, 7, R. 0 to 3 L.	Right side and anteriorly.	10 in. post. 3 in. ant. and R.	7 in.	1 h.	Within 1 in. of posterior edge.
61	" 22	M'Clean.	0 to 3 both sides and across ant. wall.	Anterior wall.	12 in. post. 3 in. ant.	7 in.	3 m.	Centre.
62	" 22	Pearson.	0 to 3 both sides.	Posterior wall.	3 in. post. 14 in. ant.	6 in.	2 h.	Centre.
63	" 22	Conolly.	1 to 4 R. and to median line.	Right side and anteriorly.	11 in. post. 4 in. ant. and R.	6½ in.	2 h.	Centre.
64	" 24	Burgess.	0 to 3 and at 6 L. Feebly in 0 R.	Left side and anteriorly.	12 in. post. 2 in. ant. and L.	6 in.	30 m.	Centre.
65	" 26	Neil.	1 to 4 R. 1 to 3 L. and across abdomen.	Anterior wall.	14 in. post. 2 in. ant.	7 in. ant. post. 7½ in. laterally.	5 m.	Centre.
66	" 26	Whelan.	1 to 4 L. 2 R.	Posterior wall.	3 in. post. 10 in. ant.	5 in.	Immediate-ly.	Near upper edge right side.
67	" 26	Boyce.	0 to 3 both sides.	Posterior wall.	12 in. post. 2 in. ant. Uterine surface downwards.	7 in.	16 m.	Near anterior edge at left side.
68	" 26	Johnson.	0 to 3 R. 0 to 4 L.	Posterior wall.	1 in. post. 12 in. ant.	7 in.	1 h.	Centre.
69	" 26	Baggs.	1 to 3 both sides and across pubic region.	Anterior wall.	12 in. post. ½ in. ant.	7 in.	5 m.	Close to upper edge right side.
70	" 27	Heron.	1 to 2 both sides and across pubic region.	Anterior wall.	Post. torn. 2 in. ant.	6 in.	10 m.	Centre.
71	" 27	Connell.	1 to 3 both sides.	Post. wall.	3 in. post. 12 in. ant.	6 in.	5 m.	Centre.
72	" 30	Ryan.	1 to 3 R. 1 to 4 L.	Post. wall.	1 in. post. 12 in. ant.	6½ in.	2 h.	Centre.
73	" 30	Brown.	1 to 3 L. 1 to 4 R.	Post. wall.	Post. want. 12 in. ant.	6 in.	2 h.	Close to post. edge.
74	" 30	Moore.	1 to 4 L. 3 R.	Post. wall.	3 in. post. 12 in. ant.	7 in.	15 m.	Centre.
75	" 30	Myers.	3 to 4 R.	High on post. wall.	4 in. post. 10 in. ant.	6 in.	10 m.	Centre.
76	Nov. 1	Gilcreest.	0 to 3 L. and at 6 L.	Left side and anteriorly.	12 in. post. 1½ in. ant. and L.	6 in.	10 m.	Within 1 in. of ant. edge opposite centre.

* Placenta removed by pressure.

† Placenta removed by pressure.

28 Dr. Doherty's further Reply to Mr. H. Carmichael's

Number.	Date.	Name.	Placental Soufle where heard.	Prognosis of Situation of Placenta.	Measurement of Membranes.	Diameters of Placenta.	When expelled.	Innervation of the Cord.
77	Nov. 1	Brien.	1 to 4 R. 2 L.	Post. wall.	2 in. post. 14 in. ant.	7 in. a. p. 6 in. lat.	15 m.	Near post. edge right side.
78	" 1	Gibson.	1 to 4 and at 6, 7, 8, R. feebly in 1 L.	Right side and anteriorly.	14 in. post. 2 in. ant. and R.	7 in.	1 h.	Rather to left side of centre.
79	" 1	Deegan.	1 to 4 L. 3 to 4 R.	Post. wall.	1 in. post. 12 in. ant.	7 in.	20 m.	Centre.
80	" 2	Daly.	1 to 2 both sides.	Post. wall.	12 in. post. 2 in. ant. uterine surface downwards.	6 in.	2 h.	Centre.
81	" 2	Sykes.	1 to 4 L.	Post. wall.	2 in. post. 12 in. ant.	6½ in.	15 m.	Opposite centre at right side.
82	" 3	Low.	1 to 2 L. 3 to 5 R.	Upper part post. wall.	6 in. post. 10 in. ant.	7 in.	1½ h.	Centre.
83	" 4	Kenny.	0 to 1 both sides and across abdomen.	Anterior wall.	14 in. post. ½ in. ant.	7 in.	15 m.	Rather nearer ant. edge than centre.
84	" 4	Meehan.	6 to 4 R. 6 to 4 L.	Post. wall.	2 in. post. 10 in. ant.	5½ in.	20 m.	Centre.
85	" 5	Allen.	1 to 4 and 6, 7, 8, R.	Anteriorly at right side.	12 in. post. 1 in. ant. and R.	7 in.	45 m.	Within 1 in. of ant. edge.
86	" 6	Largeir.	2 to 4 L. loud; feebly in 1 R.	Posterior wall.	2 in. post. 10 in. ant.	6½ in.	2 h.	Centre.
87	" 6	Buckley.	2 to 4 both sides and across abdomen.	Anterior wall.	14 in. post. 2 in. ant.	6½ in. ap. 6 in. lat.	1 h.	Near anterior edge right.
88	" 7	Crowley.	1 to 2 both sides and across abdomen.	Anterior wall.	Post. torn. 1 in. ant.	6½ in.	10 m.	Nearer anterior edge.
89	" 7	Kelly.	1 to 4 R. 1 to 2 L. and across abdomen.	Anterior wall.	15 in. post. ½ in. ant.	7½ in.	1 m.	Both cords close to posterior edge.
90	" 7	Dickson.	1 to 2 both sides.	Posterior wall.	1½ in. post. 12 in. ant.	6 in.	2 h.	Nearer post. edge than centre.
91	" 7	Waleh.	1 to 4 both sides, and at 7, 8, both sides.	Anterior wall.	Post. torn. 2½ in. ant.	7 in.	20 m.	Nearer ant. edge than centre.
92	" 8	Beggs.	4 to 2½ R.	Posterior wall.	Post. 2 in. 12 in. ant.	6 in. an. p. 5½ in. lat.	1 h.	At right side of centre.

* First pregnancy. Labour lasted thirteen hours. Child gasped, but life could not be maintained. Placenta removed by pressure.

† The expulsion of the placenta was followed by a smart gush of hemorrhage, a recurrence of which took place about an hour after. Cold, ergot, and padding were resorted to with success.

‡ Placenta removed by pressure.

§ Twins at the full period. Single placenta.

|| Placenta retained two hours; removed by pressure; slight hemorrhage.

Number.	Date.	Name.	Placental Soufle where heard.	Prognosis of Situation of Placenta.	Measure-ment of Membranes.	Diameters of Placenta.	When ex-pelled.	Insertion of the Cord.
93	Nov. 8	Dooley.	1 to 3 both sides loud.	Posterior wall.	1½ in. post. 10 in. ant.	6 in. ant. p. 5 in. lat.	1 h.	Within one inch of posterior edge.
94	" 8	Windsor.	0 to 3, and at 6, 7, R.	Right side and ant.	10 in. post. ½ in ant. and R.	7 in. ant. p. 6 in. lat.	10 m.	Centre.
95	" 11	Watson.	0 to 3 both sides and across.	Anterior wall.	11 in. post. ½ in. ant.	6½ in.	5 m.	Centre.
96	" 22	Walsh.	2 to 4 R. 1 to 4 L.	Posterior wall.	3 in. post. 10 in. ant.	6 in.	1½ h.	Centre.
97	" 23	Mahony.	In 3 L. abrupt, F.H. inaudible.	Post. wall, low down.	1 in. post. ant. torn.	..	10 m.	..
98	" 23	Kenny.	1 and 2 R. 1 to 5 L.	Posterior wall.	½ in. post. 12 in. ant.	7 in.	15 m.	One inch from centre nearer posterior edge.
99	" 27	Ryal.	2, 3, and 7 L. 1 to 4, and at 6 R.	Anterior wall.	Membranes torn.	6 in.	20 m.	Centre.
100	Dec. 3	Wright.	0 R. feeble, 0, 1 L. loud, less distinct in 3 L.	Posterior wall.	2½ in. post. 10 in. ant.	6½ in.	10 m.	Within one inch of edge at right side opposite centre.

From the foregoing Table it appears, that out of these one hundred cases, in twenty-five the placenta was attached to the anterior wall; in eight to the right side, below the Fallopian tubes; in ten to the left side, below the tubes; in three to the fundus; in fifty-four to the posterior wall; and of these only twenty-seven came "within two inches of the lowest part of the cyst." What opinion, then, should we entertain of a theory, proposed by an author, who, in contradiction to this mass of evidence, as great as perhaps was ever brought to bear on any disputed point, and regardless of the great names I have mentioned,

* This woman was delivered after a labour of four hours of a still-born child affected with dropsy throughout all its tissues. The skin was abraded, and the cord infiltrated. Hemorrhage having followed its expulsion, the hand was passed, and the placenta found occupying the whole of the left side of the uterus. It was spread out to a great extent, so as to fill a basin when removed, and when thrown into water its radicles floated, as if they had undergone long maceration.

† Tedious labour from early rupture of membranes; some projection of the promontory of the sacrum. When an attempt was made to remove the placenta by pressure, spasmodic action was found to have occurred. Hand introduced, and afterbirth separated from the anterior wall. Child still-born.

dogmatically announces, that the placenta is always low down on the posterior wall, and challenges his reviewer to deny it if he can. "Will any person tell me," he says,* "that has attended to the position of the placenta by the means I have pointed out, that out of every one hundred cases, in ninety-seven at least, the place at the close of gestation is not where I have located it; and has any person, who has been obliged at any time to take away a placenta, ever found it there, low down on the back part, or where has he found it?" To this flourish, I shall only further reply by referring to page 458, January Number, where he recalls to his recollection a case, in which he himself introduced his hand for the removal of a retained placenta, and found it "not at the fundus, but low down at the posterior part."†

The above Table is not altogether a matter of curiosity, or devoid of practical utility. It proves what has been doubted by some writers, that the stethoscope is capable of pointing out the exact situation of the placenta, a point, which may be of service, if we afterwards are obliged artificially to remove it. A knowledge of its position will direct us, which hand to employ, and enable us to pass it without hesitation in the proper direction, separating the membranes from the uterus as we proceed, and thus obviating the embarrassment they often afford, while detaching a morbidly adherent placenta. In every case, Gooch directs us to observe, before the detachment of the after-birth, which way the cord leads, whether to the front, sides, back, or fundus of the uterus, to which last situation, by the way, he is of opinion, the placenta is most generally attached. "By attention to these particulars," he observes, "you may generally know where the placenta is affixed; and as you would place your finger on the orifice of a spouting vessel, so introduce your hand, and with your closed fist within, opposed by the other hand on the outside, compress the bleeding surface."‡ With the directions here inculcated, I cannot at all coincide, as a ge-

* Dub. Jour. for Nov. last, p. 218. † Dub. Jour. for Jan. 1839, p. 458.

‡ Practical Compendium, p. 164. London, 1831.

neral rule, or even one which can often be adopted with advantage, as they are, I may say, incompatible with the true principle upon which the treatment of hæmorrhage should be conducted, namely, that of obtaining a speedy and permanent contraction of the uterus. Still I can conceive that a case might occur, in which benefit would be derived from adopting this plan; as for instance, where the uterus, notwithstanding the introduction and movement of the hand, remains perfectly flaccid, and while we are waiting until the other measures we employ shall have roused the organ into renewed action. Under these circumstances, it might perhaps be advisable to follow this recommendation as a temporary expedient. But the cord is an uncertain mode of determining the position of the placenta, it is so liable to be turned in a different direction, by irregular contraction of the uterus, a clot within its cavity, or the collapsed state of the os tincæ. The stethoscope affords a far more certain indication, and if we think fit to adopt this line of practice, will have informed us to what place our pressure should be directed. Above all, this Table exhibits how egregiously mistaken is Mr. Carmichael in his hypothesis, that nature assigned to it any one position, even where no complication exists. Here, independent of other variations, is not one case alone, but three perfectly natural cases, in which the membranes proved it to have been implanted on the very fundus.* The incorrectness of the author in this particular, then, affords me another strong argument for insisting that *his theory is not correct.*†

* It is extraordinary that Mr. Carmichael labours under the impression that the prevalent doctrine at the present day is, that the placenta is usually at the fundus. (See Dublin Journal for November last, p. 213, &c.). The quotations I have made show that this is *not* the modern opinion; and moreover, this error, which is as great as that of his own allocation, was exploded almost a century ago. "Formerly," says Smellie, "it was taken for granted by many, that the placenta always adhered to the fundus uteri; but this notion is refuted by certain observations, in consequence of which we find it as often sticking to the sides, back, and fore-parts, and sometimes as far down as the inside of the os uteri."—*Treatise on Theory and Prac. of Mid.*: Lond. 1752, p. 137.

† Mr. Carmichael certainly has the merit of pointing out that the membranes

But even his explanation of *the mode of growth* of the uterus (the anterior wall rising up, passing over the fundus, and occupying part of the posterior wall) is refuted by an argument, which he himself brings forward ; namely, that the relative position of the Fallopian tubes, must be thereby altered towards the close of pregnancy ; and he takes care to tell us, that in two of his dissections, he found them on the posterior aspect, and in the other two they were at the sides. In fact, we should always have the greatest volume of the womb at the full period situated anteriorly, but on the contrary, if we pass a line around the uterus where the tubes penetrate its substance, we shall observe three-fifths situated behind them, and two-fifths anteriorly. In opposition to the author, I am here again able to bring forward, it will be admitted, not a bad authority on the subject. " The fundus and body of the uterus," observes Dewees, " not only yield before the neck, but some one part contributes more than another to the room necessary to the comfort of the foetus, and these are *the posterior portions* ;—hence they are found thicker in the unimpregnated state, and hence the Fallopian tubes are always found, at the last period of pregnancy, *in advance of the uterus* ; a fact of much importance in performing the Cæsarian section."*—I would, while on this part of the subject, propose a simple question to Mr. Carmichael. If the placenta be originally at the fundus, and if the expansion be confined to the front of the womb, how is it possible the placenta can ever be found at the full time on any part of the anterior wall? In fact, I might, with as much justice, assert, that in these cases the development of the organ was in an opposite direction, the posterior paries increasing in altitude, while the anterior

can determine the situation of the placenta, but has fallen into a great error in the deduction he has drawn from their inspection. The mistake he has committed, must, I suppose, have arisen from neglecting to distinguish the edges of the placenta one from the other, and consequently imagining, that when a short membrane was found at any part, it indicated the mass to have been on the posterior wall. I do not know how else it can be accounted for.

* Dewees' Midwifery, p. 89.

remained stationary, or nearly so, "a thing very much in accordance with reason, seeing how necessary it is, that the placenta should be as little disturbed as possible." The fact of the tubes still continuing on the anterior aspect of the uterus, and the impossibility of affording, as far as I can see, a satisfactory answer to the foregoing question, incline me then still further to insist that *his theory is not correct*.

But I still hold also that *the mode of contraction* described by the author is impracticable, in consequence of the want of a fixed point, from which the anterior wall could act. In reply to this argument against him, he says: "I do not think this is at all supported; in order to it, it should be first shown, that there is a fixed point, which will prevent what are termed the longitudinal fibres from pulling up the mouth of the womb, and will give their action a tendency downwards, which, I believe, is not yet done;" and then he goes into a disquisition as to the muscularity of the uterus. I cannot see that all this in the slightest degree invalidates my objection, which is, that, though we have examples in the body of hollow viscera (the heart for instance) gathering themselves up to a common centre, in order to do so, it is necessary that all their fibres act in unison, so that each fibre shall be a *point d'appui* for the rest; but we have no exemplification in the animal economy (from which all our reasonings on such a subject must, or should be drawn) of one side of a viscus contracting, while another remains flaccid, nor of a rotatory movement being performed without a bony attachment, from which it springs. I have on a former occasion stated, that neither the ligaments nor the vagina, to which alone the uterus is connected, can supply such a firm bond of union to the osseous structure, as to justify us in considering them the basis, from which the powerfully expulsive efforts of the uterus take their origin. Upon this point, I shall now dilate a little more, as I consider it most conclusive against the theory in question.

* Dublin Journal for November last, p. 231.

Respecting the first then, Dewees makes a sound observation :* " Notwithstanding the uterus has four ligaments to support and sustain it *in situ*, yet this is so ill performed, as to render it very doubtful, whether it was the express intention of nature in their formation." A recent writer, indeed, informs us, that in a case of inversion, he observed and felt the round ligaments contracting distinctly, and endeavouring to draw back the fundus into its original position.† This has not been attested by any other author, but even if such a power of contraction in those ligaments were verified by further observation, it could in the normal condition have the effect only of drawing forwards the body of the organ, but not that of shortening its wall, and therefore is not applicable in the present instance. This then sets the question at rest, as far as the ligaments are concerned. But some persons may perhaps suppose the vagina is sufficient for this purpose. In reply to this argument, I should say, if the vagina be the point, from which the anterior wall acts, the uterus should completely lose its power of contraction, where laceration of the former occurs. I know well, in most cases on the occurrence of this accident, the pains suddenly cease, from the shock the system sustains, but I also know that after the escape of the child into the abdomen, the womb will be found contracted into a hard ball behind it, an indication of rupture, which is not sufficiently dwelt upon ; and it has also occurred to me, to see two cases, in which, though the anterior part of the

* Midwifery, p. 109.

† " Dans un cas d'inversion complète et absolue de la matrice sortie hors de la vulve, en forme de poire, de la grosseur de deux poings, à la suite d'un accouchement très-précipité, et de l'extraction presque instantanée du placenta, par le cordon ombilical, j'ai observé et palpé les contractions des ligamens ronds de la matrice, tant par les tégumens du bas-ventre, que par le vagin renversé et arrêté entre les grandes lèvres ; ces contractions étaient tournoyantes vermiculaires, et presque aussi fortes que le sont ordinairement celles de la matrice pour l'expulsion du fœtus : le fond, et le corps, sortis entièrement hors du bassin ne faisaient cependant plus aucun mouvement. J'ai pris ces mouvemens pour des efforts des ligamens de redresser la matrice."—*La Pratique des Accouchemens*, par J. F. Schweighœuser, de l'Hopital Civil de Strasbourg, p. 13. Paris, 1835.

vagina was torn from the os, the uterus (slowly but effectually) expelled the child by its unaided efforts. "In a severe case of eclampsia," observes Ingleby, "the cervix uteri lacerated, in its anterior and superior part, and permitted the finger to enter the abdomen, but notwithstanding this, the child was subsequently expelled by the natural powers, and the result was successful."* How then can these be explained, unless on the grounds, that the contractions of the uterus are quite independent of such a support, and are not confined to its anterior wall? I could well understand that such a mode of contraction might exist, if the anterior lip of the os tincæ adhered to the pubis, but as it is only in connexion with the vagina, the process contended for I consider to be altogether impossible.

But let us suppose for a moment, that it is feasible, and see whether some practical objections do not lie against it. If the uterine action existed only in the anterior wall, thus pulling the fundus downwards and forwards, and so drawing it out of the inlet of the pelvis, all the inconveniences which experience tells us follow the existence of pendulous abdomen, must be thereby produced. And not only would delay and difficulty be experienced by the child in entering the brim, but when the head had become firmly settled into it, the uterine efforts, instead of pressing it downwards, must be expended in flexing the body on the neck,—a motion, which the cervical joints would readily permit. If this be the case, then, in head presentations, it will also be so, when the breech is engaged in the pelvis, and the head remains in the uterus. Under these circumstances, when the abdomen of the child is turned to the abdomen of the mother, we should invariably find the head bent down upon the chest, and when in the opposite position, it should be pulled backwards, with all the force the organ is able to exert. I am aware, that in the directions for conducting breech cases, we are told, and properly too, to introduce the fingers of one hand into the mouth, or what is better, to place

* Ingleby's Facts and Cases, p. 193.

them on the upper maxilla, in order to prevent the chin turning upwards during our extractive efforts, but as Naegelé, in his excellent Treatise on the Mechanism of Parturition, has well remarked, it is our own assistance alone which tends to produce this unfavourable alteration. "If any extractive force be applied to the child, from which the pressure that results from the uterine contractions is removed, *and which acts upon the child in every direction*, and keeps the chin and arms pressed upon the breast, the arms slip upwards on each side of the head, the chin quits the breast, and the head together, with the arms, approach the superior aperture in a most unfavourable position."* Just such an effect should Mr. Carmichael's motion have upon the head, bending it backwards, and changing it into a reversed face presentation.†

Let us now investigate in what way the operation of turning would be influenced by such contractions. If it be true, that until after the expulsion of the child, the posterior wall below the Fallopian tubes remains quiescent, does it not follow, that little difficulty should ever be experienced, even after the liquor amnii has escaped in introducing the hand at the back of the uterus? And yet I appeal to the oft benumbed hands of senior practitioners to testify against this fact, as well as against the invariable existence of the placenta in this situation. When then the hand has at last been insinuated along the sacrum into the uterine cavity, I would ask, is the operation *cæteris paribus*, more difficult than when attempted anteriorly? I have never seen it so; and yet it ought to be both less easy to accomplish, and more hazardous to the patient, if the tendency of the uterine action were to draw the fundus downwards and for-

* Mechanism of Parturition, by Rigby, p. 147. Lond. 1829.

† I may in passing remark, that the above quotation should impress us with the necessity of withholding all interference, until the breech and abdomen are fully expelled. A contrary proceeding does not allow the external parts to become properly dilated, and produces delay and difficulty at the very moment of greatest risk, namely, in the extraction of the head. Thus the perinæum is frequently lacerated, and the child's life sacrificed by our over-exertions to save it.

wards, and therefore exerted in direct opposition to the practitioner, who under those circumstances is evidently turning in the reversed direction, namely, from before backwards. This might be of little importance before the membranes are ruptured, but where the waters have long drained away, would add seriously to the difficulties of the delivery. I question too, whether that form of inversion which arises from the too sudden expulsion of the child could occur; as to produce it, it seems to me necessary, that the fundus follow down the fœtus in a direction *perpendicular* to the brim of the pelvis.

Again, in attempting to remove a retained placenta by external manipulation, how comes it to pass (as judiciously noticed by Roberton,) that if we apply our friction over the pubis, spasmodic contraction is alone induced, and the difficulties are increased. But if having raised into the median line, the uterus, which generally after labour falls to one side, and lies buried under the muscles, particularly when relaxed, we rub the *fundus*, and when we feel it grow hard under our hand, aid the contractions of the *whole* organ from above downwards, by gently compressing it towards the brim of the pelvis, we shall almost invariably succeed in causing the uterus to expel the afterbirth, unless irregular contraction or morbid adhesion has previously existed? * From what does this arise unless that

* This method of removing a retained placenta cannot, I think, be too strongly inculcated, as it altogether obviates, on the one hand, the necessity of pulling at the funis, which even when the placenta appears to be detached, can never be but hazardous; and on the other, the unnecessary introduction of the hand, an operation always to be dreaded. A person attempting for the first time the plan recommended is apt to fail, as he generally places his left hand hurriedly on the abdomen, and begins pushing down towards the pelvis the first part of the uterus he feels, which is mostly the side or anterior wall. But if he will only have the patience to raise the uterus from its oblique position, and having stimulated the fundus, and got it well into the palms of both hands, direct his pressure, (and it need never be but of the gentlest kind,) *in the axis of the brim*, he can scarcely fail to succeed. If there be any difficulty, as there sometimes is, when the placenta lies over the os half expelled, in which situation the organ seems to lose its power over it, it is much better, instead of touching the cord, to get up the fingers of the right hand to the substance of the placenta, and press it backwards towards the sacrum,

the anterior wall does not originate healthy contractions? These have their salient point in the fundus, which indeed, under the circumstances mentioned, can be felt to act before any other part of the womb. This mode of contraction then, I consider, I am justified, by the foregoing reflections, in designating an assumption without a single proof to support it, which still further strengthens me in maintaining *that his theory is not correct.*

It may be asked, however, if it be not the case that the placenta, at the termination of gestation is placed in a region of the uterus which the parturient action does not reach, how comes it to pass that its function is not interfered with during the pains of labour? A well-known fact, which Mr. Carmichael has just discovered, affords, I think, a sufficient explanation. I mean the small space through which the fundus descends before the expulsion of the foetal head. Up to this period the diminution in the capacity of the organ has been so slight, that any danger arising to the placenta, even if on the fundus, (which we will grant is its most hazardous position,) is sufficiently guarded against by the spaces that intervene between its lobes, and which must be obliterated before its substance can suffer much compression. Once, however, the head has passed, the placenta too begins to feel the effects of the uterine contractions, which tend to fold it into a smaller compass; and the result is, if the child be allowed to remain in this perilous situation for more than one or two minutes, from this cause, as well as from pressure on the funis, its life becomes endangered. It is not, however, as Mr. Carmichael would lead us to believe, of

at the same time that he makes pressure in the proper direction with the left hand above the pubis. I would particularly caution the junior practitioner against pressing down the uterus before he has excited it into action, as he thereby runs a risk of producing inversion of the organ. I myself witnessed a case of this kind, but my attention being called to the disappearance of the uterus from the hypogastric region, I immediately suspected the accident, and passed my fingers into the vagina. I found the internal surface of the fundus in close contact with, and partly protruding through the os. By gentle pressure it resumed its natural position, with a spring like that produced by an Indian-rubber bottle under similar circumstances. No bad consequences followed.

utility that the after-birth be altogether protected from the uterine action; on the contrary, Joerg of Leipzig has shown the benefit which arises from a somewhat prolonged labour, in consequence of the very compression the placenta undergoes. By this means, he observes, changes are effected on the fœtus which gradually fit it for extra-uterine life, a tendency is given to the foramen ovale to close shortly after birth, and a necessity for respiration is established. But if, on the other hand, the child pass too suddenly into the world, it still retains in some degree its foetal characters, and all the bad consequences arising from a partial expansion of the lungs ensue.*

I have now shown firstly that the embryo does not form its first attachment always to the fundus; secondly, that the placenta is not always, or even in the majority of cases, low down on the posterior wall at the full period of pregnancy; thirdly, that hæmorrhage does not follow when it is rather high on the posterior wall, as proved by Cases 17, 82, &c.; fourthly, that no bad consequences ensue when it is at the period of labour appended to the fundus, as seen in Cases 2, 8, and 28; fifthly, that

* The correctness of these observations is supported by the following condensed case.

June 5th, 1839. Kelly's child born on 2nd, after a labour of half an hour, has continued since birth of a dark colour; skin cold; breathing rather difficult; tendency to spasms, particularly when drink is given to it; discharge from mouth of a greenish fluid. Lips and palate now covered with aphthæ. Sounds of heart normal.

7th. Child declining; colour of skin not quite so dark; great difficulty in swallowing, the fluid appears to find its way to the cardiac orifice, but is soon regurgitated. Dyspnoea; breathing almost suspended for a few seconds, and then spastic inspiration.

9th. Constantly moaning, particularly when a teaspoon-full of whey is given it; can scarcely swallow.

10th. Gradually sunk, and died this morning. The treatment consisted in a leech to the epigastrium, wine whey, baths, stimulating liniments to spine, calomel, ammonia mixture, &c. On examination, the lungs were found only partially permeated by air, the lower lobes still retaining much of their foetal character. The foramen ovale was evidently sufficiently open to admit a communication between the chambers. Such cases tend to support the opinion of Louis, that where the cærulean tint exists, not only is the foramen ovale open, but there must be some obstruction to the passage of the blood from the right cavities of the heart.

though from the author's observations it follows, that if it be affixed to the anterior wall, hæmorrhage and the death of the child must be produced, such results need not be apprehended; sixthly, that the position of the Fallopian tubes, and the occasional attachment of the afterbirth to the anterior wall, testify against his mode of growth of the uterus; seventhly, that his mode of contraction is controverted by the non-existence of several circumstances to which such a contraction should give rise, and by the want of a proper *point d'appui* from which it could originate; and eighthly, that so far from it being necessary that the placenta be placed altogether out of the reach of disturbance from the changes going on in the uterus, a certain amount of compression during labour is essential to the well being of the child.

A few more arguments present themselves to my mind, but I think I have gone sufficiently far to prove that Mr. Carmichael is wrong in the propositions he advocates. He starts with the assumption of a false principle, namely, that the placenta is first at the fundus, and afterwards on the posterior wall; and from this he deduces a train of reasoning which is necessarily erroneous. Practical experience too I have demonstrated to be altogether opposed to his theory; it can never, therefore, I am sure, gain any credence in this enlightened age. Medicine is too fast assuming the characters of a true science to be satisfied with mere supposition and assertion; for, in the words of Hippocrates, "it is not possible to derive advantage from those conclusions which are drawn from reasoning only, but from those which are demonstrated by practice."

As this controversy is now, I understand, concluded, at least in this Journal, I shall say it pains me much, that any gentleman should suppose me guilty of intentionally misrepresenting him. To Mr. Carmichael, to whom I am personally unknown, I shall declare, that I am incapable of distorting the sentiments of any writer to cast ridicule and reproach upon him. To my readers, I trust, I have proved, that if I did strain the author's meaning (not further than it might be legitimately drawn, but) beyond

what he intended, and thus wandered into error, I did not wittingly seek out a devious path in order to arrive at it, but followed the straight and open course, which even the most cautious, under the same circumstances, would probably have pursued.

ART. II.—*Practical Observations on Peculiar Affections of the Throat, arising from Abscess between the Pharynx and Spine, and occurring in Children and Adults, exemplified by Cases.* By CHRISTOPHER FLEMING, M. D., Member of the Royal College of Surgeons, Ireland; Member of the Court of Assistants; Lecturer on Surgery, &c. &c.

THE several obstructions, mechanical or otherwise, which occur in the fauces, and impede the functions of respiration or deglutition, have particularly attracted the attention of the Profession. They are frequently met with, and in the majority of instances they are referrible to causes sufficiently manifest. Occasionally, however, considerable difficulty attends their diagnosis, particularly in children, from the extreme obscurity and anomalous character of the symptoms. Such difficulty occurred in those attendant on inflammation at the back of the pharynx, terminating in abscess, illustrative of which I beg to subjoin the following cases.

Of a family of five boys, the eldest, aged seven years, the youngest, one year and eight months, three were attacked as follows, without any assignable cause.

The youngest, a healthy child, went to bed well; after about two hours awoke with vomiting, which attracted no particular attention; passed the night tranquilly; next morning appeared heavy, took his ordinary mid-day sleep, and was found about two o'clock, P. M., in convulsions. Immediate assistance was procured, which, notwithstanding the most prompt and active treatment, proved unavailing. I saw him for the first time about

two hours before death, he was then comatose, and almost pulseless; the left side was wholly paralytic; the right slightly convulsed. He survived the attack only twenty-two hours, dating from the supervention of the convulsions—thirty-nine from that of the vomiting.

On examination after death, considerable vascular turgescence was found within the skull, and throughout the substance of the brain. No other appreciable lesion was discernible.

This occurred on the last Friday in May, 1836.

On the following Sunday, the third boy, aged six years, was attacked. He was a remarkably delicate child, and much emaciated, being then only convalescent from remittent fever. He now vomited repeatedly, complained of violent pain in the head, and had other smart febrile symptoms. However, by mild depletory measures he passed through an illness of three or four days' duration, without any remarkable occurrence.

On Monday, the fourth boy (the subject of this communication) sickened with precisely the same train of symptoms. His age was three years and a half, and in appearance he was healthy. The premonitory symptoms of his attack, at first mild, after about thirty-six hours, assumed most intense severity, and without unnecessarily particularizing their progress, it may be stated, that the most aggravated form of high inflammatory fever set in, principally engaging the cerebral organs, and requiring the most energetic treatment to combat it. On about the fourth day, convalescence appeared established, and Dr. Cramp-ton (whose valuable assistance I had throughout the progress of this case) discontinued his daily attendance.

From day to day a peculiar fixed position of the head, and stiffness in the neck, now attracted attention. The head was drawn back. The muscles, at first tense, became completely and permanently rigid, and the movements of the head painful, and remarkably limited. Soreness in the throat was complained of, and also great difficulty in swallowing, at times accompanied with violent spasmodic efforts. There was no cough, and the

voice remained perfect. The articulation became remarkable,—the words being as if drawled out with pain and difficulty, and at times perfectly unintelligible.

Repeated and careful examination of the fauces and neck could not detect any apparent local cause for those symptoms, which, with varied degrees of intensity, advanced, producing equally alarming constitutional disturbance and debility.

At first, disposed to attribute them to concurrent local causes, such as the quantity of mercury administered during the acute illness of the child; the cold from the renewed application of ice to the head, or some partial internal effusion, the result of the acute inflammatory attack, more serious mischief was now apprehended from their increasing severity and permanency. The treatment adopted was principally with the view of promoting the absorption of any fluid effused, and consisted chiefly in the exhibition of mild mercurial alteratives, and the application of counter-irritants to the region of the occiput.

On about the tenth day, the symptoms had reached their acmé; the child, emaciated and weakened, had no relish for food, and appeared to drink merely to allay thirst, the efforts at swallowing being convulsive and painful. He was now in a perfect state of somnolency, regardless of every thing about him, when accidentally, whilst sitting beside his bed, I perceived, that *position* most remarkably influenced the severity of the prominent symptoms. Stupor in the recumbent posture, almost amounting to perfect coma, in the sitting, or even semi-erect, resolved itself into a comparative sensibility. Respiration, slow, laboured, and stertorous, or rather roaring, (as described by the attendants on the child,) in the former position, became comparatively tranquil in the latter, and a pulse, in the one, ranging only a beat or so above forty, in the other, assumed a more natural character. Again, fluids were more frequently darted convulsively forwards through the nostrils or mouth, than passed into the stomach, or were ejected, as in the act of vomiting, and the recurrence of the symptoms of cerebral com-

pression took place on returning to the recumbent posture, which for the last three days had been almost the permanent one.

I now considered that this relation of symptoms might still be caused by mechanical obstruction in the pharynx, although repeated examinations on former occasions did not lead me to this conclusion. An additional obstacle presented itself in the fixed position of the jaws, so that it was only by considerable force I could so far separate them as to admit of even getting my little finger between them. On forcing it back, I accidentally, but distinctly, felt a tumefaction beyond the base of the tongue, giving, as well as a compressed finger could indicate it, a sense of yielding. To get a view of it was utterly impossible. The soft palate and uvula were easily discernible, but the depression of the tongue gave so much pain, and the separation of the jaws was so very limited, that further investigation was totally out of the question. Indeed, in addition, the evidence, even from touch, was necessarily momentary, from the severe paroxysms of dyspnoea attendant on the examination.

Although I had never heard of, nor witnessed a case of the kind before in children, it at once occurred to me, that this might be an abscess at the back of the pharynx, mechanically producing the above symptoms, and having stated this as my opinion to the family, the assistance of Dr. Crampton and Mr. Cusack was immediately procured. After a patient, though extremely unsatisfactory examination, they coincided in opinion with me as to the presence of a tumour in the situation alluded to, and it was determined that I should perforate it with an explorer which I had provided for the purpose, with the view of ascertaining its actual nature,—a doubt existing on this head, not alone from the extreme firmness of the tumour communicating a very indistinct sense of fluctuation, but also on account of its probable anomalous nature from the previous acute and present chronic cephalic symptoms. With every necessary precaution I accomplished this object, though with considerable difficulty, and to my great gratification, witnessed the sudden

gushing forth of a large quantity of healthy purulent matter. The whole features of the case were almost instantaneously altered. The somnolency was removed, deglutition was facilitated, and more cheering prospects manifested themselves. Nourishment was freely given throughout the day, and Quinine administered in small and repeated doses.

At my evening visit I perceived that the stertorous breathing had returned, and that the more prominent symptoms which had ceased since the operation, were again in some degree present. I examined the throat, and fortunately found the separation of the jaws now accomplished with ease. The abscess was again filled, with the opening closed. I introduced a carefully protected sharp pointed bistoury into the site of the opening, and freely enlarged it downwards. The relief was instantaneous. I now directed the trunk of the child to be elevated as much as possible, and the head depressed. The night was passed comparatively tranquil; the quantity of matter which escaped through the mouth was considerable, largely staining the pillow. The next day, the boy was able to play with his brothers, and subsequently his improvement was progressive, though slow.

He is now a fine healthy boy. I do not particularize the treatment adopted during his convalescence; there was nothing peculiar in it, its principal object being to improve the general health.

The next case, which I shall select, is that of a boy aged seven months, proving the remarkable fact of the occurrence of such an affection during the first period of childhood, as the former does, during the second.

In April, 1838, I was sent for to see this child by the father, who stated that he had great apprehension his little boy was labouring under water on the brain: that many children of his immediate family had fallen victims to it, and that the symptoms under which this child laboured, were exactly those by which the attacks of the former had been ushered in. On visiting the child, I found every indication of gastro-enteric derangement, so common at this period of life, and very suspicious

cerebral complication, rendered more so from the fact of hereditary pre-disposition. In addition I found, that some lymphatic glands, on the left side of the neck near the angle of the jaw, were enlarged and painful, evidently depending on ulceration behind the corresponding ear. The mouth, fauces, and pharynx were free from lesion, and one of the incisors on the lower jaw had just made its appearance.

The treatment was principally directed to the abdominal system, and to the relief of the glandular irritation noted. After a few days, improvement was so manifest, that I had omitted a visit on Friday.

On Saturday morning I received a hurried message to see the child, and found that the more alarming symptoms had all returned during the previous night, that the restlessness was incessant,—that the vomiting was constant,—that the flushing of the face was renewed,—that the breathing was loud, laboured, and very irregular during the night,—and that he constantly started from most disturbed sleep, which would only be tolerated in the nurse's arms; that every attempt at putting him in the cradle aggravated the pulmonary symptoms. In addition I observed that the head of the child was rather drawn back, and that the chin projected somewhat unnaturally. He immediately screamed when the jaws were attempted to be separated, and in the region of the neck there was the greatest tenderness, particularly over the glands above alluded to. The integuments were free from discoloration, yet still the tumefaction was decidedly increased, and the slightest motion of the head appeared to give great pain.

At the moment, I was disposed to attribute the recurrence of those symptoms to a smart attack of inflammation in these glands, and was led to hope that the combating it, would relieve them. The treatment was accordingly directed with that object in view. Leeches were applied; fomentations and poultice used, and a smart mercurial purgative administered.

Sunday.—Night spent wretchedly; no alleviation of symptoms, with the exception of those connected with the inflamed

glands : they are better : the other symptoms are, if possible, more aggravated. In addition to those enumerated in the report of yesterday, there is now a gurgling noise in the fauces as if from accumulated mucus, and throughout the lungs there is evidence of considerable effusion into the larger bronchial tubes ; there are repeated and apparently painful and difficult efforts at swallowing, accompanied with frightful paroxysms of dyspnœa occurring at irregular intervals, during which the countenance becomes suffused, purple, and almost convulsed, and it is remarked that those immediately supervene on attempting to place the child in the cradle ; there is incapability of sucking, though great desire for the breast, the nipple of which is seized with avidity, and equally rapidly ejected with a sudden and spasmodic regurgitation of the milk ; any fluid placed in the mouth, either remains for a short time, and then gradually dribbles out, or otherwise produces a paroxysm accompanied with similar phenomena. At the moment of my visit, the repeated exertions of the child at the attempt of swallowing, the severe dyspnœa, and the great accumulation of mucus in the fauces, with the very restless state of the child, led me to apprehend the supervention of a fit of convulsions. I thought I recognized some of the features of the above case, when from some unintentional act in my examination, a most severe paroxysm supervened. The child appeared suffocating : I rapidly passed my finger into the fauces, and feeling a fulness I made pressure against it, which was increased by a convulsive effort of the child ; a sudden discharge of purulent matter got exit through the nostrils, and temporary relief was obtained, until I procured the additional assistance of Sir Henry Marsh and Mr. Cusack.

Perhaps about an hour or so had elapsed from the above occurrence when we met in consultation. At this time the breathing, though principally nasal, was more tranquil ; and a small quantity of fluid had been swallowed, but with much difficulty. The appearance of the child could not but make an impression upon those who saw him. The nostrils were

filled with matter which trickled down the lip ; any attempt at placing him in a recumbent posture was instantly followed by frightful dyspnoea, rendered still more serious from the great accumulation of mucus in the fauces. I directed attention to the throat, but notwithstanding every effort, no accurate view could be had of the back of the pharynx. The narrow space behind the root of the tongue was filled with pus and bubbles of frothy tenacious saliva, to clear which away repeated unsuccessful attempts were made. Here the freedom of separation of the jaws allowed of free, though rapid examination of the fauces, but the back of the pharynx could not be seen. I, however, felt a distinct tumefaction, and failing to puncture it with the grooved curette, as in the former case, I was obliged to rest satisfied with what had been done, arranging to watch the progress of the symptoms, and to support the child by every possible means, by introducing fluids through a tube passed through the nares, and by broth enemata ; to be prepared, if necessary, to open the trachea should any fresh symptoms of suffocation supervene ; and in addition, to keep constantly cleared away the accumulating phlegm at the back of the throat.

By visiting at short intervals, and carefully enforcing the above injunctions, the strength was supported, and the symptoms to a certain extent stayed. Next day they were stationary, though it was quite evident that considerable obstruction yet existed in the throat ; however the strength was improved, and the countenance of the child decidedly better. Another day passed without any material change, when the discharge from the nostrils ceased, and evidently, any opening made, or rather the ruptured portion of the sac had closed. Difficult respiration in any but the erect posture, or on an inclined plane with the head considerably depressed, recurred. Perfect inability of sucking and swallowing again set in, and suffocation appeared impending, when Mr. Cusack saw the child, and was still more satisfied of the presence of a tumour at the back of the pharynx. It was so tense and so unyielding, that did not the history of the

case justify the presumption that matter was present, the absence of any sense of fluctuation would have caused extreme doubt; another difficulty presented itself in its being below the level of the tongue. The very limited space to operate in, together with the risk of wounding the neighbouring vessels, on account of the disposition of the swelling rather from the median line towards the left side, suggested the propriety of selecting some instrument the action of which could be accurately gauged. That which I had used in the former case was objectionable, not alone from the want of sufficient command of it from its conformation, but also from its shape. It was agreed that delay might be safely hazarded until next day, leaving word, however, that should any urgent symptom set in, I should be informed.

Next day, I found that throughout the night great apprehensions were entertained lest suffocation should have taken place. All other bad symptoms remained, if not aggravated, at least stationary; and having arranged in the interim with Mr. Cusack, an instrument was contrived which succeeded most admirably. It consisted of a trochar about four inches long, one extremity

Fig. 1.—Cannula.

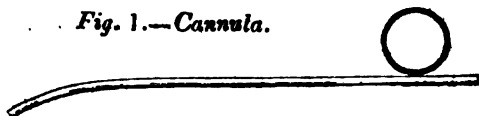
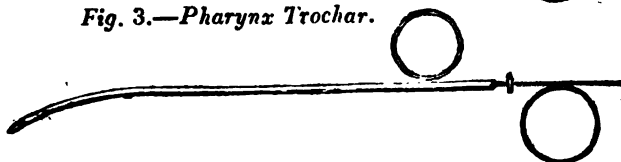


Fig. 2.—Stilette.



Fig. 3.—Pharynx Trochar.



of the cannula being slightly curved, the other with a ring on its upper surface to receive the fore-finger; into this cannula was passed a jointed stilette, with, at its opposite extremity, a

ring for the thumb, and a moveable screw to graduate the projection of its point. Mr. Cusack having firmly supported the head of the child, I passed the forefinger of the left hand, towards the back of the pharynx, there resting the point of it, and guiding the armed trochar with the concealed stilette along it, accurately fixed it on the tumour, pressed forwards the stilette to its limited mark, and withdrawing it by an opposite manœuvre, was gratified to see a quantity of healthy purulent matter darted forwards on the child's clothes.

The relief was immediate; the hæmorrhage trifling; and the result permanently successful. In this case it was unnecessary to renew the opening; the discharge, at first temporarily ceasing, returned, and the cure was rapid.

The boy is now a fine healthy boy. The constitutional treatment was similar to that adopted in the last case.

Such is the history of two extreme cases of *acute* abscesses at the back of the pharynx, occurring in children, selected from others of the same nature, which I have witnessed within the last three years, and necessarily with opportunities comparatively limited. I have brought them forward as remarkably illustrative of the symptoms attendant on their progress; as novel at that period of life, in the records of medicine, as far as I have been enabled to learn, from the investigations I have made; and as corroborated by the testimony of others.

I cannot instance the history of any similar acute case occurring in the adult, which came immediately under my observation, although I have watched for such with much anxiety for no very short period. I have attended many severe cases of tonsillitis, which have terminated in suppuration, some of which I have opened between the pillars of the fauces, and some on the anterior part of the velum. I have met with abscesses of the velum itself, and of the uvula, and I have met with one or two of that description, so accurately and so beautifully described by Petit,* which form *behind* the tonsil, and I believe always im-

* Traite des Maladies Chirurgicales et des Operations qui leur conviennent

plicate more or less the auditory apparatus, but I have never been able to detect an abscess situated distinctly at the back of the pharynx, or perhaps, I should rather say, that the symptoms attendant on such did not attract my attention. That such collections take place cannot, however, be questioned. The experience of our surgeons in extensive practice, will bear testimony to the fact of their occasional, though extremely rare occurrence, and will, I am sure, confirm the statement, that their attendant symptoms are so equivocal and anomalous, that if discovered, they have been so by the merest accident. The first systematic author I find particularly alluding to their presence, is Sir Astley Cooper. In his *Lecture on Abscesses*, he thus expresses himself. "Abscesses are also dangerous, from their being situated in vitally important parts, such as the brain, heart, or lungs; or when they are not seated in parts of vital importance, from their pressure on essential organs.

"CASES.—A woman was admitted into Guy's Hospital for a complaint in the throat, occasioned by *swallowing a pointed bone*.—All she complained of at first was a soreness in the throat: but she was shortly after seized with difficulty of breathing, which increased greatly, and she died. On examination after death, I found, upon making an incision into the pharynx, that *between it and the forepart of the vertebræ*, a large abscess had formed, which, by pressing the pharynx forward on the epiglottis and glottis, occasioned difficulty of breathing, and in the end, destruction of life. Shortly after this, Dr. Babington came to this Hospital with a friend of his, who was labouring under great difficulty of breathing. He requested me to examine his throat. Having put my finger on the back of the pharynx, and felt fluctuation there, I told him that this was a case of which I had seen *an instance*, where the patient had died, from a collection of matter formed in the same situation.

I immediately procured a seton needle, and including it in a cannula, like a trochar, I put it down into the pharynx, let out a considerable quantity of matter, and the patient was relieved. Here was a case which, but for this operation, would probably have terminated fatally, by the pressure of the matter on vitally important parts."

In the "*Dictionnaire de Medicine et Chirurgie Pratiques*," under the article "*Pharyngotome et Pharyngotomie*," another case will be found, in which the presence of an abscess at the back of the pharynx was detected, and its puncture followed by successful results. But in each and all of those recorded cases, it is a remarkable fact, that the abscess was actually formed, before a suspicion of its existence was entertained, so extremely equivocal were its premonitory symptoms, even in the case where the exciting cause naturally led to the examination of its immediate seat. Hence, it appears to me, that the subject is one of extreme importance, and fully deserving of separate investigation.

Let us then inquire into those circumstances in connexion with it, which will best explain the nature of the affection, its progress, and the treatment calculated to remedy it.

From the report of the cases, and the details of the attendant symptoms, (given perhaps with unnecessary minuteness,) a particular description of this affection may in a great measure be dispensed with. It is evidently one of an inflammatory character, and, like the majority of such, may be acute or chronic, circumscribed or diffused, as appears from the following extract from the "*Elements of the Practice of Medicine*," by Drs. Bright and Addison. "Acute idiopathic pharyngitis, or that in which the inflammation is limited to the pharynx, is of extremely rare occurrence. We have only seen two instances of the kind. One occurred in a female beyond the middle period of life, the other in a man between forty and fifty years of age. The female, after exposure to cold, was attacked with pain in the throat, and great pain and difficulty in swallowing, speedily

followed by the ordinary signs of febrile excitement. The pain and difficulty in swallowing rapidly increased, till at length the smallest particle of food or drink could not be taken. *The voice was distinct, but the articulation imperfect, as if the patient were unable or unwilling to exert the laryngeal muscles.* On making a careful inspection, scarcely the *slightest trace of inflammation could be detected in the throat*, nor could the epiglottis be distinguished; but on making pressure on one spot externally on the right side, and at the posterior part of the thyroid cartilage, the patient complained of acute pain. She was bled from the arm, and had leeches applied to the neck, followed by a large warm poultice, and the inhalation of warm water vapour. Under such treatment, the disease yielded in a few days to such an extent, that she was again able to swallow, but acute pleurisy now supervened, which, in her reduced state and bad constitution, speedily proved fatal. On examining the parts after death, unequivocal marks of acute inflammation were found at the lower part of the pharynx, the inferior portion of the epiglottis, and posterior surface of the arytenoid cartilages, together with such a degree of purulent infiltration into the sub-mucous cellular tissue in the latter situation, as almost to present the appearance of an abscess, although the cellular structure itself was not broken down. Had not the disease been subdued, this might have undoubtedly *passed into a state of abscess, which, by its increase of size and consequent pressure upon the larynx, would probably have seriously interfered with the process of respiration, or even have proved fatal by producing suffocation.* The symptoms of the other case bore an exact resemblance to the above, with the exception of the pain on making pressure externally, which was not present in that instance."

Here are evidently recognizable, the local phenomena of *diffuse* inflammation, confirmed by the transfer of disease to the thoracic organs, so frequent in similar cases.

For my own part, I am disposed to the opinion, that, with

very few exceptions, this particular affection of the throat is *always* symptomatic, in some cases, of *direct* injury, as in that cited from Sir Astley Cooper's Lectures, but, in by far the great majority of cases, *symptomatic* of some *constitutional* derangement, *general* or *specific*; *general*, as the result of fever, and particularly of that form of fever, termed by the French pathologists "gastro-encéphalite" or *specific*, in the two-fold sense in which that term is applied by practical authors, namely, *specific*, as to the exciting cause, or *specific*, as to modification by constitutional peculiarity.

These considerations appear to me of great importance in influencing the character and progress of the attack; in the one, stamping it with an acuteness and rapidity of supervention alarmingly deceptive, and in the other, with a chronic tediousness not likely to escape detection.

Its seat is unquestionably between the back of the pharynx, and the muscles on the anterior part of the spine, in the loose cellular, or rather reticular texture, there to be found intervening. It is nothing more or less than inflammation in this region, terminating in suppuration; and, to have an accurate knowledge of the pathological conditions present, as well as of the symptoms attendant on them, and the requisite treatment, it is absolutely necessary to bear in recollection both the structural and relative anatomy of the pharynx. Perhaps in few other lesions can we more satisfactorily exemplify the relations between cause and effect. For example; the extreme tension, and almost unyielding hardness of those tumours on pressure, stated in the report of the cases, will be accounted for, by the very strong, though apparently diaphanous membrane, upon which its superior constrictor is expanded at its posterior and upper part, and the locked state of the jaws will be partially accounted for, at all events, by the attachment of a portion of that muscle in its lateral aspect.—The facility of opening the mouth in some cases, and the impossibility in others, may be referrible either to the amount of matter collected, and hence greater tension, or perhaps to the for-

mation of the lower jaw in the child, as it was in the youngest that this freedom of separation existed most.—Again, the cerebral symptoms, and those affecting the respiratory organs, are easily attributable to the mechanical pressure on the nerves and important vessels on the one hand, and to the presence of impure blood in the nervous centre on the other,—while, the peculiar position of the head, the inability to elevate it, the rigid state of the muscles at the back of the neck, and the supervention of the almost apoplectic interval when in the recumbent posture, may be referred to the varying pressure exercised on the glottis from the projection of the abscess opposite that opening, necessarily influencing more or less the free entrance of air to the lungs.

In childhood these effects on the brain are of the greatest moment; all practitioners are aware of the great predisposition which exists at that period of life to cerebral disease; that it is induced by the most trifling, sometimes the most opposite, causes, and that none more frequently give rise to it, than those which create any derangement in the circulating capillary system, already so necessarily active in the immediate vicinity of this organ; that the several cutaneous diseases incidental to this period of life often terminate fatally in it, or are complicated with it, and none perhaps more than those which are accompanied with affections of the throat; for instance, Variola or Scarlatina? How awfully fatal are not those diseases in childhood; and in the most alarming cases, is not the throat often seriously engaged? Nay, more, may it not be one of the causes of the cerebral affection? These considerations have led me to an opinion which I am strongly induced to entertain from reflections, both anatomical and practical; namely, that the more close investigation of the causes and symptoms of this affection in its *acute* form may tend to limit the fatal results of those diseases, inasmuch as in them we know it to be a fact, that the glands in the neighbourhood of the throat are constantly and extensively implicated in

its inflammatory affections ; and that if, as I at present feel satisfied from the examinations I have made, some of those glands are to be found in the loose reticular texture between the pharynx and the spine, more frequently in the earlier than the advanced periods of life, we have an additional point, at all events, to direct our attention and treatment to, which may assist materially the operation of remedies.* That this affection which I bring under the consideration of the Profession, is not unfrequently an acute inflammation of one of those glands, particularly in childhood, I am strongly disposed to think, and I am confirmed in the opinion even by the history of the very cases which I have adduced. That those glands are only occasionally found in this situation I admit, and hence probably the rare occurrence of this particular form of disease ; but that they do exist more frequently than is generally imagined I am equally certain ; and I also believe that those affections of the throat termed scrofulous, when engaging the back of the pharynx, and presenting deep ulcerations, are often no more than chronic suppuration and ulceration of them.

To sum up then I would say, that I consider this affection of the throat in children, when *acute* in its progress, as, often, an inflammation of a lymphatic gland situated at the back of the pharynx ; an inflammation extremely rapid in its progress to suppuration from its particular position ; that I would watch for it during the period of difficult dentition, and in the several cutaneous affections or diseases of the gastro-intestinal mucous membrane to which children are liable ; and that I would consider as strongly pathognomic of its presence the following symptoms :—

Fever, more or less sthenic in its character according to the

* The presence of lymphatic glands between the pharynx and spine is noticed by Cloquet in his Anatomy ; and in three out of four cases where I have had an opportunity of making the investigation in children under six years of age, I have found one, two, or three, very small, but yet satisfactorily present.

peculiarity of constitution of the child is always present, and, I think, precedes the development of the local symptoms.

These local symptoms are premonitory and essential.

The *premonitory*, indicative of *local* uneasiness, but yet common to all affections of the throat; complained of, or otherwise, according to the age of the child, and on examination, not accompanied with proportionate visible lesion. The *essential*, often very suddenly supervening, and indicated by derangement of the cerebral, circulating, and respiratory systems,* alternating with the comparatively healthy condition of those systems, according to the alteration in the position of the individual.—Fixed and retracted state of the head, with rigidity of the muscles at the back of the neck, and more or less locked state of the jaws.—Painful deglutition, impossibility of swallowing solids, and fluids convulsively darted forward through the mouth and nose.—Repeated acts of deglutition without the presence of any fluid in the mouth, and, on examination of the fauces, a firm, projecting tumour felt beyond the base of the tongue, and if seen, presenting a smooth, rounded, highly vascular appearance behind the soft palate, usually occupying the median line, but occasionally inclining to either side. These *essential* symptoms accompanied with the ordinary characteristics of suppurative fever.

The presence of those symptoms appears to me so conclusive of a collection of matter at the back of the pharynx, that I would not for a moment hesitate to decide on its nature, and proceed to open it. In such cases, I think the interference of the surgeon absolutely necessary, not alone from the fact of certain fatal results from mechanical pressure on, and interference with, vital organs, but also from the situation of the abscess being particularly favourable to extensive diffusion. In opening it, great caution must be observed, and a careful assistant at hand to steady the head, and throw it forward the moment the abscess is punctured.

I am disposed to recommend an instrument much on the convol.

struction I have alluded to. I think it a manageable instrument, and fully within control, and I think the triangular wound made with it, less likely to heal by adhesion, than one made with a lancet or bistoury. Another advantage also arises from the valvular shape of the opening, whereby a too copious or sudden discharge of matter is prevented, and a greater or less extent of subsequent ulceration secured, by which the opening becomes gradually proportioned to the contracting walls of the cavity, and hence is placed in a position more favourable to permanent healing.*

The necessity for caution will be proportioned to the situation of the abscess, being more called for where it deviates from the median line, or exists below the level of the tongue. I have seen one instance, referrible, I think, to this class of disease, in which a spontaneous opening took place, and here the situation of the abscess was very high up, and the discharge was principally through the nose.

It occurred in a boy not more than *four weeks' old*, who had a well marked attack of erysipelas of the face and scalp, ushered in by a severe fit of convulsions. He was under the care of my friend Dr. Fitzpatrick, with whom I was in attendance. Independent of the age of the child, the case was most unpromising, from his extreme delicacy of constitution. Every, the most unfavourable symptoms, were present. In fact, we thought the

* The "Pharyngotome" of Petit is familiar to all. It was invented expressly for the opening of abscesses of the velum and tonsils, in his valuable remarks no allusion being made to such an affection of the pharynx.

It was, in fact, a lancet supported on a stilette, with a spring at its opposite end, both contained within a cannula, provided with a sort of spatula to depress the tongue. It was straight, and so, from the difficulty of contriving one curved, which would admit of free protrusion of the stilette. The jointed stilette of Hourteloup, however, compensates for this, and the advantage of the trochar-shape I have mentioned. The curve is desirable, independent of its adaptation to every position of the abscess. The finger is decidedly the best spatula, accommodating itself to the morbidly sensitive state of the lingual muscles, and at the same time serving as a director for the trochar.

child almost in *articulo mortis*,—when, a *sudden and profuse* purulent discharge took place from the nostrils. The features of the case rapidly altered, and the child got well. At that time I was unacquainted with the form of disease in question; but I think it more than probable, that it was one of those critical depôts behind the pharynx; at all events the case is worth recording, from the occurrence of erysipelas in the situation mentioned, at that very early period of life, and from its successful issue.

It is unnecessary to dwell on the diagnosis of this affection of the throat, or allude to those diseases with which it may be confounded, their respective descriptions being so extremely accurate, as merely to require reference to the authors who treat on them. Unquestionably, in the advanced stage of it, where the tumour is considerable, and the symptoms of cerebral compression intense, particularly where much debility and emaciation are present, (not unlikely concomitants,) it is more than probable that it may be overlooked, and the fatal result attributed to other causes,—and in the earlier stage, many symptoms exist, not unlike those attendant on spinal disease in this portion of the cervical region. Attention, however, to the history of the case, to the presence of fever, and to those features which have been noted *as essential*, will at once remove any difficulty.

Chronic abscesses, single or otherwise, are also occasionally found in this situation, during the earlier periods of life. They are often actually formed of some size before detected, and this, probably, from the little inconvenience they occasion. They are connected more or less with that state of constitution termed *scrofulous*, and I am satisfied that they will be found of the same nature with similar degenerations (if I may use the expression) of the cervical glands, so common in those constitutions.

The symptoms attendant upon them are in a much milder degree of the same character with the acute, and perhaps, the most prominent are, the remarkable effect produced on the re-

spiration, by change to the recumbent posture. There is absence of fever, and throughout the day the child is free from any obvious illness,—able to play, and join in the amusements of other children ; I have known them not to complain of any uneasiness in the throat, and attention to be directed to it, from the raucous breathing during sleep. In fact, the symptoms much resemble those of common scrofulous induration of the tonsil.—They are hence, cases of comparatively minor importance ; there is time to investigate them. Indeed, with them may be complicated chronic enlargement of the tonsils. I have met with them after scarlatina, after variola, and after measles. In fact, they are some of the sequelæ of those cutaneous diseases, and like them may be accompanied with suppuration of the internal or external ear, and so come under the description of similar cases already alluded to, as described by Petit. They possibly may require surgical interference, and always are benefited by those local and general remedies suited to their peculiar nature. At the same time, it is perfectly intelligible that they may undergo a spontaneous cure, and altogether escape observation.

The remarks which I have as yet made, are principally in reference to this affection, as an occurrence in childhood. From them the following conclusions are, I think, justly deducible.

First,—That a new cause of obstruction in the throats of children exists, independent of those noted by authors who treat on their respective diseases.

Secondly,—That the presence of the obstruction is indicated by symptoms peculiarly characteristic, although extremely equivocal in their nature, if not accurately investigated. And

Thirdly,—That its removal is effected by an operation, simple in performance, and, as far as can at present be ascertained, certain in its results.

With respect to this affection in *adults*, I have already stated that I have not had an opportunity of witnessing an instance. I cannot, however, imagine otherwise, than that the attendant symptoms, in the incipient and advanced stages of the

inflammation, must very much resemble those as detailed in the child, with the great additional advantage of the history from the patient, and yet, how extremely anomalous and deceptive must they not be, when we reflect on the cases which I have brought forward and reported.—In all, the *premonitory* symptoms did not attract attention, and even in those which were recognized, and terminated favorably, the *essential* were too characteristic from their extreme development, and mechanical operation, to escape notice. That they occur, however, cannot be questioned, and that they are, with certain restrictions, attributable to similar causes, is more than probable.

The case I have alluded to in the “*Dictionnaire de Chirurgie, &c.*,” is conclusive, as to the occasional supervention of abscess behind the pharynx during or after fever, in the *adult*, just as the first case I have detailed, is, in the *child*.

“ Il est assez rare que l'on soit obligé de porter l'instrument tranchant dans le pharynx, soit afin de donner issue à des collections purulentes formées a son voisinage, ou dans son epaisseur, soit pour dégager et extraire des corps étrangères arrêtées dans sa cavité. J'ai vu, cependant, il y a peu d'années, un malade qui, a la suite d'une gastro-encéphalite grave, avait eu un *abcès critique volumineux* a la partie posterieure du pharynx. La bouche étant *largement ouverte*, et la *langue abaissée avec le doigt*, ou le *manche d'une cuiller*, la tumeur se présentait rouge, tendue, luisante et lisse à sa surface, faisant dans le pharynx une saillie considerable, qui obstruait cette cavité, rendait la respiration difficile, s'opposait au libre passage des substances alimentaires, et alterait beaucoup l'articulation des sons. La tumeur s'étant développée dans la paroi cervicale du pharynx, directement en arriere de l'isthme guttural, l'incision qui en fut pratiquée donna issue a une grande quantité de pus, que le malade rejeta au moyen d'efforts d'expulsion peu considerables, et la guérison eut lieu en peu de jours.”

In this case and in that given by Sir Astley Cooper, it is remarkable with what facility the mouth was opened, and the

tongue depressed, as it forms a strong contrast with the almost utter impossibility of accomplishing the one, and the excessive pain induced on attempting the other in those cases I have met with. It may perhaps be attributable to the greater powers of accommodation of the structures engaged, to their new position, at the former period of life than in the latter ; but I am inclined to refer it more to the very rapid progress of the acute form of the disease in children, and the accompanying fever, a circumstance not noted in the other cases. They are, in fact, more of a chronic character. Indeed no account is given of the constitutional symptoms, or whether any existed ; and it is almost certain that such would not have escaped the accurate research of those who witnessed and reported them, did they present any peculiarity beyond that arising from their local effects. Hence an additional circumstance in favour of their *chronic* nature.

It would certainly be a most interesting fact to be enabled to adduce an instance of the occurrence of such an affection, *acute* in its progress in the adult. Possibly some of the suddenly fatal cases in tonsillitis are confounded with them.

Allan Burns, in his "Surgical Anatomy of the Head and Neck," thus expresses himself when on the subject of suppuration in the tonsil.*

"When the collection of matter is large before the abscess bursts, the patient is in a more dangerous situation than is generally imagined. His breathing is obstructed and gasping ; he feels much anxiety in the chest ; his face is dark and bloated ; his eyes are painted with vessels containing purple-coloured blood, they are prominent, and seem ready to start from their sockets. We cannot be deceived in regard to the origin of those symptoms, which decidedly show that the lungs are imperfectly supplied with impure air. Whenever the abscess bursts, the mouth and fauces

* Surgical Anatomy of the Head and Neck, by Allan Burns. Glasgow Edition, 1824.

are filled by a gush of matter, every obstruction to the free entrance of air is suddenly removed, the patient fetches an involuntary and deep inspiration, air and matter rush together into the trachea, and death from suffocation is almost the inevitable consequence.

"This, to some, may have the appearance of a fanciful description, or, at all events, an overcharged picture; but its fidelity will be admitted, when I inform them, that in this very way a strong, active young man lately lost his life. He had been complaining *for a few days of a sore throat*, for which he had consulted his surgeon, who had employed the usual remedies. The inflammation terminated in suppuration: the abscess enlarged until the tumour occupied the entire fauces; yet *ten minutes before his death*, he was walking about the house, restless indeed, anxious, and gasping for breath. The bursting of the abscess and death followed each other so rapidly, that no measures could be taken to prevent the latter event.

"The cause of death was not conjectured in this instance; the body was examined, *and the trachea found deluged with purulent matter.*"

It is much to be regretted that the condition of the larynx is not particularly noted, as the history of the case is by no means conclusive of the actual nature of the affection of the throat; it merely states, "sore throat," a very equivocal expression.

Is it not a fact, that in the most severe cases of acute cynanche tonsillaris, the inflammation occupies a greater or less portion of the soft palate and its pillars? That the tongue can be hardly protruded, and that the jaws are separated with difficulty; and in this condition is not the base of the tongue so circumstanced as rather to favour the protection of the glottis; an office in which it is not unlikely assisted by the effusion of serum, or lymph mixed with serum, to a greater or less amount, on the anterior aspect of the base of the epiglottis? Here is it

likely that an abscess of the tonsil would burst into the trachea? or rather that the glottis would admit the matter? I think not. I think in such severe cases, death is much more attributable to the surrounding serous effusion producing cedema of the glottis, and its consequences; or to the extension of a bad character of inflammation producing a similar effect on the glottis, from sub-mucous purulent infiltration.

It may be said that among the symptoms I have enumerated as pathognomic of abscess behind the pharynx, the peculiar state of the jaws now noted, existed, and that it equally favours the same position of the tongue, and the same condition of the glottis; but here it must be borne in recollection, that the situation of the abscess (when of a *phlegmonous* character, perfectly *circumscribed*) would above all others oppose this effect of the epiglottis. It acts from *behind forwards*, and so far forms an obstacle to otherwise perhaps fatal results, an obstacle assisted within certain limits by the posture selected by the patient. But on the other hand, how is this effect circumstanced as far as regards the glottis, should this abscess give way? or should the surgeon be incautious in opening it? Surely the passage of the matter into the trachea is almost inevitable. May such results not have occurred without detection? may it not have been the case here? The only provision against such a termination is the extreme laxity of connexion between the spine and the posterior part of the pharynx favouring its descent, and the more dense nature of the aponeurotic expansion already alluded to *in the median line*, being unfavourable to its pointing in that situation.

When we recollect, however, the laws adopted by nature to direct the progress of abscesses situated near *mucous* membranes, and that those laws are the more strictly adhered to, the more *acute* the nature of the abscess, and the more distant from a *cutaneous* surface, we can reconcile to ourselves the opinion that such provisions would not prevent the *direct* bursting of such abscess notwithstanding their presence. The same re-

marks are not applicable to *chronic* abscess; and hence the extended route they take may be accounted for, as instanced in two cases reported in the Transactions of the Association of the College of Physicians, on abscesses between the *oesophagus* and *spine*, which at their commencement were most probably situated behind the upper part of the pharynx, and there recognizable by sight or touch.*

In the adult then, as in the child, the acute abscess behind the pharynx imperatively calls for the early and prompt interference of the surgeon, who must necessarily observe the same caution already alluded to in reference to its treatment. The selection of the trochar is perhaps still more advisable from the great probability of a considerable accumulation of matter. The constitutional treatment here, as in that of the child, includes, of course, those restorative means generally adopted under similar circumstances.

* The report of those cases is to be found in the third volume of the Transactions of the Association of the Fellows and Licentiates of the King and Queen's College of Physicians in Ireland, under the head of a communication referring to the operation of tracheotomy. The peculiar circumstances attendant on the history and progress of the first case reflect much credit on the candour of the author; and the remarks on the diagnostic signs of *abscesses between the oesophagus and spine*, with the requisite treatment, will amply repay the practical inquirer. I would particularly recommend the original paper, as the extracts in the periodicals of the day omit what is, perhaps, most important. A comparison with the *essential* symptoms of abscess between the pharynx and spine, will be found conclusive as to the difference between these two affections.

The assertion, that by possibility the seat of those abscesses may have been *originally between the pharynx and spine*, and visible at the back of the throat, cannot for a moment be construed into the presumption that such could have escaped the attention of the reporter; at the period at which they came under his immediate observation, it is particularly noted, that no abnormal appearance presented itself in that situation; and it is to be borne in recollection, that their previous history and progress were very obscure. Again, I by no means attempt to deny the possibility of an abscess *originating below the termination of the pharynx*; on the contrary, I have seen such. The treatment best adapted to them appears to me questionable. They certainly are more favourably circumstanced for *spontaneous* opening, than those the subject of the present paper.

Chronic abscess in this situation is, in the adult, I would say, always symptomatic of some constitutional derangement resulting from a specific taint.

It may be scrofulous, and decidedly it may be connected with those anomalous affections occurring in the progress of cases of a pseudo-syphilitic character. As, in such affections elsewhere, our principal aid must be derived from constitutional treatment, which it is unnecessary here to particularize. The local treatment may vary in each individual case as to time of interference, but in all, I believe the slow evacuation of the contents of the abscess is prudent. The complication of an abscess in this region of the spine with disease of any of the cervical vertebræ, will of course materially modify its character and progress, but not having met with such, I merely allude to their possibility of occurrence.

The diagnosis of this affection in the adult, is to a certain extent unattended with much of difficulty, and principally, perhaps, as in the child, escapes detection from the little local distress induced by its presence. Some caution, however, is called for notwithstanding, as in the situation in which it occurs, other affections of a chronic character are met with, with which it may be confounded. Allan Burns, for example, mentions a case where a *polypus* was mistaken for an abscess of the tonsil. Is it not equally probable, that a similar mistake may be made in the case of chronic abscess behind the pharynx ; or, might not a chronic tumour, malignant or otherwise, in the same situation, lead to a similar mistake. These considerations, however, are not exactly relevant, or if so, are unnecessary, as they imply more than unusual carelessness on the part of the practitioner.

Enough then has been advanced, confirmatory of the presence of this form of disease in children, and in adults, and explanatory of those most prominent symptoms attendant upon its progress and full development. It most certainly is to be met with at *both epochs* of childhood, as an *acute* and *chronic* affection, and more than probably is similarly so in adult life. In both, it requires on the part of the surgeon, promptness and ex-

treme accuracy of diagnosis, and in both, the most circumspect caution and decision as to treatment. Attributable to causes already specified as generally applicable, the chronic form in the adult may be complicated with constitutional lesions somewhat peculiar, arising from diseases to which he is more liable.

ART. III.—*On Retroversion of the Uterus, and a new Method of treating that Affection.* By CHARLES HALPIN, Esq., of Cavan, L. R. C. S. in Ireland, Practitioner of Midwifery, &c.

[Read before the Obstetric Society of Ireland, 2nd January, 1840.]

MR. PRESIDENT AND GENTLEMEN,

THE subject I have prepared for your consideration this evening, is *Retroversion of the Uterus*.

In considering this affection I wish to bring before you so much of its history ; the symptoms by which it is characterized ; and the various methods that have been heretofore adopted to remedy it, as may be necessary to elucidate a case of this nature, in which I was lately consulted : and I trust I shall be able to demonstrate to this meeting, that the plan of treatment I had recourse to in its replacement, is so easy of application ; so safe in its employment ; and so certain in its effect, that it is worthy of the very best attention of the Profession at large ; and more especially of those who have made midwifery, and its attendant affections, their peculiar line of practice.

The first account we have of retroversion of the uterus, is to be found in the fourth volume of “ *Medical Observations and Inquiries*,” published in the year 1771. This is a communication from Mr. Lynn, with an Appendix by Dr. William Hunter. Mr. Lynn calls it “ *A fatal Case of Inversion of the Uterus, and Rupture of the Bladder in Pregnancy.*” Dr. Hunter, in the appendix, objects to the term “ *inversion*,” as being equivocal, and proposes the introduction of the word “ *retroversion*.”

In October, 1754, Mr. Walter Wall, a surgeon in London, was called to see a young woman then labouring under sup-

pression of urine and fæces. She was then in the fourth month of her first pregnancy. Mr. Wall had attended the lectures of M. Gregoire in Paris ; and remembering a case of retroverted uterus related by him, was satisfied that this was a similar one, and endeavoured to restore it to its natural position, as taught by that gentleman ; but he did not succeed. He then requested Dr. Hunter to visit this patient, whose case, terminating fatally, became the subject of that celebrated lecture, which first pointed out to the practitioners of this country the nature of the malady, together with the means of remedying it. In the succeeding volume of those observations, published five years afterwards, we find five other cases recorded ; and also a paper from Dr. Hunter, containing some very valuable remarks on its nature and treatment. Since that time it has been treated of by most writers on midwifery, and in this day its characters seem to be well understood.

Retroversion of the uterus is that malposition of this organ, where its fundus, instead of lying upwards towards the umbilicus, is forced downwards and backwards into the pelvis, below the promontory of the sacrum ; whilst the os uteri is carried forward, above the symphysis pubis. In this situation it deranges, very considerably, the functions of the bladder and rectum. For, anteriorly, the compression of the os uteri on the neck of the bladder causes either partial or total retention of urine ; and posteriorly and inferiorly, the fundus pressing on the rectum obstructs the free passage of the fæces. Retroversion usually takes place between the third and fifth month of pregnancy. It may, however, arise, as may also retroflexion of the uterus, independent of impregnation. It may exist earlier than the third month, but may not be noticed by the patient, as the uterus is not then sufficiently bulky to produce unpleasant consequences. After this period its attendant symptoms manifest themselves. The calls to make water become more frequent than usual. The patient passes small quantities of it at a time ; sometimes this is attended with forcing and pain ; at length it

becomes difficult ; and finally the retention is complete. Some drops may come away in a dribbling manner, and occasionally she may be able to pass a few ounces at a time ; but I believe, when the retroversion has arrived at this stage, the bladder is never completely emptied by the natural efforts of the patient, until after the displacement is rectified. The bladder now becomes distended above the pubis, rising as high as the umbilicus, and even above it, filling the anterior of the abdomen ; and the bowels frequently become obstructed to a very dangerous extent.

On examination by the vagina, a large tumour, usually about the size of a foetal head, is felt between the vagina and rectum, which fills the hollow of the sacrum : the os uteri cannot be reached with the finger, or only reached with difficulty, as it lies, in most cases, above the pubis. Other diagnostic symptoms exist, but I shall only insist on those I have detailed, as they suffice to illustrate my views, and the method of reduction I adopted.

Should not this state of things be remedied as soon as possible ? Hear what Dr. Hunter says : “ Must we not presume that every woman is in *danger*, who has a retroverted uterus ? ”* I think so.

The introduction of a catheter is, at all times, most disagreeable to the feelings of a female : and some would endure any suffering, rather than submit to it. In this affection, it is sometimes so difficult, that the most expert operators will fail. Consequent on this we find, great distention of the bladder, frequently followed by inflammation ; adhesion of the bladder to the abdominal parietes ; rupture or sloughing of the organ, with extravasation of urine into the cellular tissue, or into the peritoneum ; followed by the death of the patient. Inflammation and gangrene of the vagina, and external parts, have also been produced by the pressure of the tumour ; this latter, lying

* Med. Obs., vol. v. p. 893.

on the rectum causes an accumulation of fæces to take place; which tends to force the uterus still further into the pelvis; where, finally, it may become so firmly wedged, that no means we were hitherto acquainted with will be able to dislodge it.

“ I think,” says Dr. Hunter,* “ where it can be done with ease, it would be better to put an end to pain and danger, by replacing the uterus. And when we can easily, and at once, remove her pain, and put her into a state of security, can it be advisable to be passing a catheter for days and weeks together, till the uterus recovers itself; even, if we could be sure that this would happen?”

From the days of William Hunter to the present time, very little improvement (if any) has taken place in the treatment of this disease. Nay, I think I am borne out in saying it has retrograded. An enumeration of the various methods resorted to will show this clearly.

Dr. Hunter, in Mr. Wall's case,† having procured the discharge of a considerable quantity of urine, “ placed the patient on her knees and elbows, with the shoulders as low as possible; then introduced one hand into the vagina, and two fingers of the other into the anus, * * * but these attempts were all in vain, she became weaker and weaker, and died on the following Monday.” “ On dissection, the uterus was found firmly wedged in the pelvis.” He then asks,‡ “ Would it not be advisable in such a case to perforate the uterus with a small trochar, or any other proper instrument, in order to evacuate the liquor amnii, and thereby render it so small and lax, as to admit of its reduction? If other methods failed, I think such an operation should be tried.” In subsequent practice “ the urine was first completely drawn off, then a sufficiently stimulating clyster was thrown up, and after the bowels were well emptied, it was always found easy to replace the uterus.”§

* Med. Obs., vol. v. p. 393.

† Ib. vol. iv. p. 403.

‡ Ib. vol. iv. p. 406.

§ p. 408.

In Mr. Wilmer's case, published in 1779, he followed Dr. Hunter's method, with two fingers of one hand in the rectum, and two of the other in the vagina, but did not succeed; as the uterus was firmly locked in the pelvis.*

Dr. Denman, in illustration of the opinions and practice of the men of his day, says:† “In case of failure by plain and common methods, the means we have been advised to pursue, many of which are severe, and some extremely cruel, as well as useless, would best describe the dread of those consequences which have been apprehended from retroversion.” For himself he relied chiefly on attention to the state of the bladder and rectum, trusting greatly to the spontaneous rising of the uterus to its natural position.

Burns follows Hunter's method. He “would even introduce the whole hand itself into the vagina * * * * * forcible and violent attempts are, however, to be strongly reprobated: they give great pain, and may excite abortion, inflammation, or convulsions.”‡

Dr. Davis§ advises “the introduction of the first and second fingers of the right hand within the sphincter ani, with which we are to keep a steady pressure on the uterine tumour, so as to raise it gradually up—this must be done, not with violent jerks, but by a most cautious effort.” If the fingers are not sufficient, he passes an *instrument* that shall be long enough to continue the bearing; it consists of a piece of cane of considerable thickness, with a broad, firm, and finely textured piece of sponge secured at its top. When this has been borne for some time on the retroverted fundus, the latter will sometimes be felt to pass suddenly up into the abdomen.

This is the first mention I find of an instrument being used in the treatment of these cases.

Mons. Dussausoy, then senior Surgeon to the Hotel Dieu at

* Cases and Remarks, p. 147.

† Denman's Mid. vol. i. p. 146.

‡ Burn's Mid. p. 173.

§ Mid. pp. 845, 846.

Lyons, "with proper caution passed into the rectum the four fingers and the thumb of his right hand, and, spreading them on the whole convexity of the tumour in such a manner as to embrace its entire surface, he applied considerable pressure from below upwards," &c. Another case is mentioned by Dr. Davis in which the whole hand was passed through the sphincter ani for the same purpose. Dr. Davis does not give the practitioner's name; but he adds, "the author is convinced, from some trials made on the dead subject, that such a thing may be done without rupture of the sphincter."

Dr. Blundell* is exceedingly partial to the plan of keeping the bladder and rectum empty, and the patient placed in a position favourable to the spontaneous return of the uterus. If these gentler means fail, he would introduce one or two fingers into the vagina (the patient being in a suitable position) and press the womb, endeavouring to urge the fundus above the brim of the pelvis; or he would introduce the fingers of the right hand into the vagina, and the thumb into the rectum, so as to get a double bearing on the uterus; or, with Dr. Hunter for our guide, with one finger of the left hand in the rectum, and one or two of the right placed on the os uteri, we should endeavour to draw it down into the pelvis whilst we pushed up its fundus.

Where reduction could not be accomplished by any of these means, and where the symptoms became urgent, other measures of a more dangerous tendency have been advised and resorted to; for instance, the bladder has been tapped above the pubis, by Dr. Cheston; Cruickshank recommends the division of the symphysis pubis; Dr. Hunter advises tapping the uterus; and Hamilton, Dewes, Boivin, and others, recommend breaking up the structure of the ovum by the introduction of an instrument through the os uteri.

This is a concise summary of our knowledge on this subject;

I shall now lay before you the particulars of the case that called forth these remarks.

On the 7th of December I was called to see A. B., the wife of a respectable farmer in my neighbourhood, in consultation with Dr. Finlay of Belturbet. She is about 23 years of age: she has been married about five months; has menstruated but once since her marriage. For the last five days she has experienced more or less difficulty in making water, with much pain at the neck of the bladder. Bowels costive. She has had aperients which acted well; was leeches three times above the pubis; and used the hip-bath with relief. For the last two days she has not been able to pass more than two ounces of urine at a time. I found her lying on her back with her knees drawn up as in peritonitis. Her impression is that she is pregnant, but the abdomen is larger than she thinks it should be at so early a period; and this increase has occurred chiefly within the last few days. Tongue white and loaded; pulse 90; spirits very good.

On laying my hand on the abdomen I found it enormously distended. A large pyriform, soft tumour, reaching from the pubis to half a hand's breadth above the umbilicus, filled it anteriorly. She complained of a tense feeling, with much pain about the neck of the bladder. From these symptoms and the history of the case, it was plain that there was a great accumulation of urine within the bladder. I proposed the introduction of a catheter, which, after much difficulty, was agreed to by the patient. This is a matter in which I have had a good deal of experience, but in this instance I could not effect it; and although I persevered a considerable time in endeavouring to do so, using the greatest gentleness and caution, I could not recognize the orifice of the urethra. On examining the vagina I found that she had complete retroversion of the uterus: the fundus, lying low in the pelvis, could be felt within an inch of the external parts. I now handed the instrument to my colleague, Dr. Finlay, an experienced midwifery practitioner, who, after a

most patient trial, succeeded no better than myself. Unwilling to allow such a large quantity of urine to remain, I again attempted the introduction of the instrument, or rather, I wished to make a more accurate investigation of the state of the parts, to ascertain in what the difficulty lay, in order to take the measures proper to overcome it. The os uteri was high above the pubis: the orifice of the urethra, instead of being situated just above the vagina, and somewhat anterior to the pubis, was drawn completely backwards and upwards, and was so stretched by the rising up of the bladder, that it had lost completely its nipple-like, or dimple-like feel to the finger. It was so thinned by tension, that I recognized it with difficulty. How was I to reach it? The female catheter was quite unfit for this purpose; and, unacquainted with the nature of the case, I had brought none other with me. I now raised the uterus with my finger as much as I was able, at which the woman passed about four ounces of urine, and felt greatly relieved; she had an anodyne that night, and slept pretty well. I visited her early next morning, taking with me several gum elastic male catheters. Having selected one of large size, I curved it a good deal more than when used in the male, and introduced it without much difficulty, drawing off five quarts of water. As there was nothing very urgent in this case, I advised that little more should be done than keeping the rectum and bladder empty. On the 10th, I was again sent for; the retention of urine was complete, she had not passed a drop since I left her; and Dr. Finlay, having tried the introduction of the catheter most carefully and perseveringly, was obliged to relinquish it altogether. I drew off about seven pints of urine, and on this, and the two following days, I endeavoured by position, and gentle, steady pressure, with two fingers in the vagina, to return the uterus.

On the 14th I found the symptoms greatly aggravated. Circumstances, which I could not control, prevented my visiting her on the preceding day. Persisting in her refusal to permit any person but myself to introduce the catheter, the bladder had again become greatly distended, and so painful that

she could not lie down ; the desire to evacuate its contents was incessant, accompanied with strong forcing pains. Her countenance exhibited great distress and painfulness ; her mind was in a state of anxiety and alarm ; pulse had risen to 110 ; bowels confined since last visit ; stomach so irritable that it will not retain medicine of any kind. I drew off about five pints of turbid urine, the temperature of which, as it passed over my hand, appeared much above the natural standard, and it sent forth a powerfully foetid, ammoniacal odour. Although greatly relieved by this, there was still a sharp burning pain in the region of the bladder, that produced much distress. The rectum was so pressed upon, that it was found impossible to throw up an enema.

In this state of things it was plain that the palliative plan had been carried far enough, at least ; and that something decisive must now be done was equally clear. Accordingly, having placed her in the proper position, I introduced two fingers of my right hand into the vagina, and pressed the tumour upwards and forwards ; the resistance, however, given by the promontory of the sacrum was so great that I felt I should not be able to overcome it. Though I used all gentleness possible, the woman expressed great agony, crying out, almost to screaming, "that I would burst something within her, if I did not desist."

My fingers became so painful from cramps that I was obliged to withdraw them. After an interval of rest I renewed my attempts ; two fingers of the right hand being in the vagina and the thumb in the rectum, as advised by Dr. Blundell. This gave greater pain than the former trial, the patient still exclaiming, that " I was bursting something in her inside." I now relinquished all hope of being able to return the uterus safely by any introduction of the fingers or hand into the vagina or rectum, and retired with Dr. F. to consider our difficulties. I communicated my impressions to him ; which were, that on bringing my fingers to bear upon the tumour, I found I could al-

ways move it to a certain extent, but after it reached this it became fixed, and I could feel the parietes of the uterus yielding under the very small point of contact afforded by my fingers; this gave rise to the sensation of rupturing the parts complained of.

I now saw clearly that my only chance of rescuing this woman from her perilous state would be, in the use of some instrument which could be brought to bear equally on all parts of the tumour, and with which sufficient power could be applied to raise it fairly above the promontory of the sacrum.

It instantly occurred to me, that *with the assistance of a bladder I should be able to inflate the pelvis, and thus raise its contents into the abdomen.* We acted on this suggestion. I attached a small recent bladder to the tube of a stomach pump, with an air tight piston, and having immersed it a few moments in warm water, to bring it to the heat of the body, I introduced it, empty, into the vagina, between the fundus of the uterus and the rectum. Retaining it within the vagina by holding my hands firmly across its orifice, Dr. F. inflated it slowly and steadily. After a time she complained of a sense of tension or bursting, but no pain. We then ceased throwing air into the bladder, allowing what was in already to remain, keeping up, as it did, a steady, equal, well-directed pressure on the tumour. After the expiration of five minutes we threw more air into the bladder, when the patient exclaimed slowly, "Oh, now you are forcing something up to my stomach!" I retained the bladder some time longer in its situation; and then, previous to withdrawing it, permitting the escape of some air, I introduced my finger, and had the satisfaction of finding that the tumour was no longer in the pelvis, and that the os uteri lay within reach of my finger, pointing downwards and backwards. I then, and not till then, removed the apparatus.

Here, gentlemen, is a simple narrative of the case, on which it may be necessary to make a few observations. First; the difficulty of introducing a catheter. Nothing tends to facilitate

an operation so much as the selection of a proper instrument to perform it with. The common female catheter is excellent in ordinary cases, and when the patient's mind is quieted respecting it. I have seen great alarm caused by its bright metallic appearance; and in this case the patient thought, from this circumstance, that some formidable operation was intended: and I had much difficulty in relieving her mind from this distressing apprehension. Again, it could not by possibility be introduced from the position of the meatus. The flexible catheter has many advantages. It may be curved to any degree that may be required: it is so soft, so yielding, and as this woman expressed it, "so innocent looking," that one need not be afraid of it. And let me assure you, it is no small matter to possess the confidence of your patient on an occasion such as this. My manner of using it is to curve it at the point, so as to be able to bring it to act on the displaced meatus, and then to give the stylette a lateral bend, about the centre, which enables me to avail myself of the use of my left hand. I rest my right elbow on the bed, and, having ascertained the orifice of the urethra with the point of my forefinger, I slide the catheter upon it with my left hand, and thus insinuate it gently into the urethra. Sometimes its onward progress is impeded, the direction of the urethra being altered; or pressure of the os uteri obstructs it: by withdrawing about an inch of the wire, and moving it a little from side to side, it will frequently find its way easily into the bladder. Forceful attempts are to be deprecated: much more is to be gained by gentleness and patience.

I now come to consider the instrument which I have found so efficacious. It consists of a small recent bladder, armed with a stop-cock, attached to the tube of a syringe: from our knowledge of the capacity of the pelvis, it will be easy to select one of proper size. A recent bladder is to be preferred, as being particularly easy of introduction. I stated in the commencement, that it is easily applied, safe in its employment, and unerring in its effect; and I do hope, and trust, that when trial has been

made with it, its utility will be admitted. If the force obtained by a body of air is not sufficient for our purpose, by substituting water we shall be in possession of a power that will be irresistible, not only by the soft parts within the pelvis, but even (were it necessary) to the bursting asunder of the bones that form that cavity; whilst, at the same time, we have this power so completely under control, that no bad consequences can arise from its use. Contrast it for one moment with the formidable proceeding of introducing the whole hand into the vagina, or through the sphincter ani, together with some fingers of the other hand into either of those passages to assist it. Not all the proper caution of the senior surgeon of the Hotel Dieu at Lyons can ever make this other than a painful, dangerous operation. It is a piece of cruelty, which I trust will give way before the safe and painless method I have detailed: "in which," to quote the language of Dr. Blundell, in commending the palliative method, "there is no introduction of the hand into the vagina; no entrance of the fingers into the rectum; no force; no contusions; no lacerations."

This instrument, I take it, is applicable not only for restoring the uterus to its normal situation, but also for retaining it there. Dr. Gurtshore advises filling the hollow of the sacrum with sponge, to prevent a recurrence of the retroversion.

Dr. Blundell, and others, direct us to keep the patient in bed for two or three weeks, resting on the knees and elbows once or twice each day, for an hour or two at a time. Very few women will, or can, submit to this confinement. The retroversion having been rectified, I would introduce, as a pessary, a gum-elastic bag constructed on this principle, and inflate it to a proper state of distention. It will remain without producing the least annoyance to the patient; and cannot, from its nature, obstruct the free passage of either urine or fæces; whilst it will render the descent of the uterus within the pelvis a matter of impossibility. This pessary will also be found useful in other affections of the uterus, and its appendages.

And now, gentlemen, having given you such a history of this troublesome, and sometimes dangerous malady, as my scanty sources of information would admit of; and also a plain, but faithful detail of this case, I have but to beg of you to consider calmly, what is the value of the suggestion I have thrown out this evening. It may be said, that I am sanguine in my estimate of the remedy I propose. If I am so, it is for this reason: I found my patient in a critical, a perilous situation; her husband and friends looked to me to rescue her from that state: the ordinary means for relieving her had failed in my hands; and at one moment I felt, that not only was my professional character at stake,—for one false step would probably ruin my prospects for life,—but that the life or death of my patient depended, in a great degree, on the decision I came to. The idea of *inflating the pelvis*, flashed across my mind: having once conceived it, the execution of it was easy, and the result has been most favourable; for, from that moment she has not had one unpleasant symptom.

If, in the course of your practice, you find my suggestion of value to you, and that by its adoption, you are enabled to release poor suffering woman from the methods heretofore resorted to in the treatment of this affection, “many of which,” says Dr. Denman, “are severe, and some extremely cruel;” it will ever be a source of unfeigned happiness to me, that I have been thus enabled to bring it before you.

ART. IV.—*Contributions to Surgical Pathology.* By WILLIAM HENRY PORTER, Professor of Surgery in the Royal College of Surgeons in Ireland, Surgeon to the Meath Hospital and County of Dublin Infirmary, and Consulting Surgeon to the City of Dublin Hospital.

[Read at the Surgical Society of Ireland, 1st February, 1840.]

ANEURISM OF THE CAROTID ARTERY.

IN the details of the case which have given occasion to the following reflections, it may appear an almost fatal imperfection,

that I have not been able to verify the correctness of my views, by a *post mortem* examination of the parts engaged in the disease, and perhaps the omission may, in some respects, diminish the interest that would otherwise attach to it ; but although the case ended fatally, it was not in my power to procure permission to inspect the body, and the failure of my endeavours to obtain this object, is one of the principal reasons to induce me to lay it before the Profession. A length of time may elapse before I shall have an opportunity of seeing or treating an exactly similar case ; perhaps (as they are very rare) I might never again meet with an example, and therefore I am anxious to call the attention of my brethren to the subject, in order that some one else may complete that which I shall only seek the merit of having commenced. There is another circumstance that invests this case with a more than ordinary degree of interest. Although attended with several unpromising symptoms, I freely confess I undertook the operation with very sanguine expectations of success. After it had been performed, every thing seemed to progress very favourably ; even when the unpleasant occurrence of a suppurating sac made its appearance I was not much alarmed ; but when death took place, from a cause that I had scarcely anticipated, and but slightly dreaded, it at once led me to reflect most seriously on the circumstances that could render an operation, generally so successful, in this particular instance so entirely abortive. The case to which I allude was one of aneurism of the carotid artery—the chief point to be verified by dissection is, whether of the external or interval ? I believe it was of the latter, and the reasons on which that opinion is grounded will be found hereafter.

In considering the causes that may interfere with, or prevent the successful issue of an operation, and the recovery of a patient, it is rather an unusual view of the subject to regard the situation of the tumour as exercising a very decided influence, or to aver that the principle on which we treat an aneurism in the ham or in the thigh with almost a certainty of success, may not

be applicable to the management of a similar affection in a different locality. Yet such, I fear, is practically correct ; and although other collateral circumstances must be taken into account, as contributing their share in the production of this unpleasant result, yet I believe the internal carotid artery will be found so placed, as to afford a peculiar facility for the occurrence of these untoward complications, and that operations performed for the cure of aneurisms of this vessel, are attended with a degree of uncertainty scarcely to be expected elsewhere. In order to the correct understanding of this position, it will be necessary to say a few words on the manner in which an aneurism is cured by a ligature being placed on the trunk of the vessel, at the cardiac side of the tumour.

When such ligature is applied, it merely removes the impulse of the heart from the circulation through the vessel beyond it. The blood necessary to the nourishment of the limb or part at its distal side, is then conveyed thither by the anastomosing branches, which are generally too small to convey the impulse of the heart at the same time, and thus whatever blood enters the sac of the aneurism is no longer thrown in with a jet or *per saltum*. It thus can exercise no influence either on the fluid blood within the tumour or on the elastic qualities of the sac or its coverings : it is allowed to remain quiescent within its cavity, and no portion of it is forced back into the general circulation again. So circumstanced and at perfect rest, the natural tendency of the blood is to become coagulated, and the coagulum thus formed, being restrained by the sac and its coverings from extending itself in any other direction, is pushed towards the point where there is least resistance ; that is, against the open vessel which it compresses and causes to become obliterated, just as would happen to any bleeding artery under the continued pressure of a clot. In order, says Scarpa, that the compression may produce the union of the two opposite sides of an artery with each other, and at the same time the radical cure of the aneurism, it is necessary, that, besides the vitality of the

coats of the artery, the degree of pressure applied upon it be such as to place the two opposite parietes of the injured vessel in firm and complete contact, and that it be at the same time capable of exciting the adhesive inflammation in the proper coats of the artery. Without the concurrence of these circumstances the compression does not prove beneficial, or only produces an incomplete cure ; for, whenever the compression is not sufficient to place the two opposite sides of the artery in complete and firm contact, and does not excite in them the adhesive inflammation, including also the root, properly speaking, of the aneurism, the canal of the lacerated or wounded artery remains open and pervious as before the use of the compression. If this view of the case be conceded, (as probably it will,) it must follow, that any thing capable of disturbing the blood within the sac, will interfere with the process of coagulation, and thereby delay, if it does not prevent, the cure ; and that any condition or position of the sac, which will allow the pressure of its contents to be directed otherwise than against the injured vessel, must have a similar effect. Either of these circumstances, taken singly, may prevent the cure ; when both are combined, success is scarcely to be hoped for.

When pulsation is observed to return in the aneurismal tumour in a short time after the application of the ligature, it is obvious that the great object of completely cutting off the impulse of the heart has not been attained ; that blood, to a greater or less quantity, not only enters the sac, but that some is returned again from it, and that the blood within it is constantly disturbed, and therefore kept in a state unfavourable to coagulation. This phenomenon of the re-appearance of pulsation, has of late years been frequently observed, and many of the causes that may conduce to it are now well known ; some of them being of a nature entirely to prevent the cure of the aneurism, such as the existence of two large trunks in the limb, by an irregular arterial distribution, or where one or more large branches arise from, or otherwise communicate with the sac, and others which

only delay the sanative process, but do not (at least necessarily) completely interfere with it. These latter are, firstly, the circumstance of the ligature being tied so loosely as not only not to stop the current of blood through the vessel, but not completely to cut off the impulse of the heart from the distal circulation; and what is of more importance, as bearing on the present subject, the existence of such an extensive and free communication by anastomosis as will convey to the tumour, by a circuitous route, the impulse which the ligature was intended to remove. I know not how far such a communication may be established in an aneurismal limb by a preternatural increase of size in the collateral vessels: such has been spoken of by authors, but I have no evidence of its existence in any one particular case to an extent sufficient to produce the phenomenon alluded to. However, I believe this unhappy condition obtains, with respect to aneurisms of the internal carotid artery in the neck, and that the free and extensive anastomoses through the vessels of the brain in their natural and normal state, will be quite sufficient, in some instances, as in the following case, to delay the process of cure, in others perhaps, to prevent it.

On the 21st of August, 1829, I performed the operation of securing the trunk of the common carotid artery of the right side in a woman of the name of Rourke, in the Meath Hospital: as this case has been already published in the fifth volume of the Dublin Hospital Reports, I shall merely remind the reader of some facts in connexion with it, which it may be necessary to refer to hereafter. It was a case of aneurism of the carotid of fifteen years' duration, consequently its growth had been extremely slow, and it might be reasonably inferred, that the aperture leading from the artery into the sac was very small; it was firm, hard, and solid, containing scarcely any fluid blood, and on examining the fauces, no pulsation could be observed within. The progress of this case was attended with some unpleasant consequences, such as a return of pulsation in the tumour in four hours after the operation,

and suppuration of the sac; however, eventually my patient recovered, and left the hospital early in the following March to resume her former occupation as a servant. She had never been a very healthy person, and was afterwards frequently an inmate of the hospital for pectoral complaints: however, at length she died, on the 7th September, 1836; and I may mention, as a singular instance of strength of mind overcoming the prejudices so constantly met with in persons of her condition, she bequeathed her body to me, and by permission of the Inspector of Anatomy, it was sent to the School in Park-street.

On examining the neck, it was recollected that in the course of the operation, the sternal and a large portion of the clavicular attachments of the sterno-mastoid muscle had been divided, yet during the remainder of life, the patient never seemed to experience any inconvenience or imperfection of motion in consequence. The condition of this muscle, then, first attracted attention. At the inferior part of the neck, and for two inches above the clavicle, there was not a trace of fibre remaining of the muscle, and its place was supplied by a dense and strong fascia attached to the clavicle, below and into which the remnant of the muscle was inserted above. In short, the inferior portion of the muscle seemed to have been converted into this fascia; on dividing it, the jugular vein, and the ligamentous-like substance into which the artery had degenerated, were exposed:

The remnant of the artery exhibited one continuous and unbroken cord from the bifurcation of the innominate to the division into internal and external carotids, so that, although the vessel must have been divided by the separation of the ligature, it had united again, and the exact spot at which it had been tied could not be ascertained. The internal carotid also was obliterated up to the spot where the ophthalmic artery was given off within the skull. In close connexion with this, was the remnant of the aneurismal sac, a small, firm, fibrous tumour, of an oblong shape, and nearly of the size and form of a very large almond; it lay a little below the posterior belly of the digastric

muscle, and on the lingual nerve, to which it had some connexion, but not very intimate. The external carotid was pervious, but as compared with the vessel of the opposite side, greatly diminished in size, as were all its branches, excepting only the thyroid, which was pretty nearly of its natural dimensions. In consequence of the injection not being very perfect, the anastomoses were in general not minutely developed above the thyroid artery, but the communication between this and the branch ascending from the subclavian was extremely free, and the inosculations of these vessels within and on the surface of the thyroid gland very numerous, much more so than between the vessels of the opposite sides of the neck.

The subclavian on the right side was at least of twice the diameter of that on the left; the vertebral was enlarged in the same proportion; and the ascending branch of the thyroid was also increased in size. The chief external communication was between the ascending and descending thyroid arteries, which seemed to be the medium by which the external carotid and its branches were supplied: the quantity of blood formerly brought to the brain by the internal carotid, was afterwards furnished by the vertebral, which became enlarged throughout its whole course, until the formation of the basilar artery, after which the entire circulation of the brain was perfectly normal.

This dissection proves that in this case at least, the re-appearance of the pulsation after operation, was caused by the free and extensive anastomotic circulation through the brain, and that, without the slightest appreciable enlargement of the collateral vessels. The dissection was seen and examined by Dr. Hart, now Professor of Practical Anatomy in the Royal College of Surgeons in Ireland, and the preparation remains in the Museum of the School of Medicine and Surgery, Park-street. So far then, it has been shewn that the locality of the internal carotid is unfavourable to the cure of aneurism by operation, by at least, delaying its progress; I have now to shew how the same

influence may prevent it altogether. But previously, it may be advisable to mention the leading particulars of a case in which such an unfortunate failure actually took place.

Matthew Markey, æt. 38, of low stature, and very strong make, admitted into the Meath hospital on the 19th September, 1838, with a very large aneurism, occupying nearly the entire of the left side of the neck. It extended from about three quarters of an inch above the clavicle to the mastoid process, was bounded posteriorly by the trapezius muscle, and anteriorly it pushed the larynx considerably to the right side. The entire circumference of the neck over the most prominent part of the tumour, was fourteen inches and three-quarters: from the thyroid cartilage across the tumour, to the spinous process of the fourth cervical vertebra nine inches and a quarter: from the same points, the measurement on the opposite side amounted to but five inches and a half. Examined by the mouth, the appearances of the tumour were most alarming: the pulsation could be distinctly seen, and the blood almost felt under the mucous membrane; it seemed ready to give way, and burst into the mouth every moment, and so remarkable, and so urgent was this symptom, that on requesting my friend Dr. Graves, then the physician in attendance on the hospital, to examine this patient, I received a note from him, strongly pressing the necessity of immediate operation, lest such a catastrophe should take place. It is needless to detail the other symptoms; they were such as are usually observed, except that the tumour was very soft, the blood within it evidently fluid, and of course, the pulsation extremely violent. This peculiarity might, in some respects, be explained by the history of the case.

The disease may be said to have existed but a few days. Only five weeks had elapsed, since he first perceived a small hard tumour like a kernel, near the angle of the jaw, perfectly moveable, without pain, and (as he stated) without pulsation. In the course of ten or twelve days, it became uneasy, but not actually painful, and he poulticed it, in the expectation that it

would suppurate and break : it, however, increased in size, although slowly, and occasioned a good deal of annoyance in the motions of the head. It had then become distinctly pulsatile. Only seven days before admission, while at work, and after exerting himself considerably, he was suddenly attacked with most excruciating pain darting from the tumour across the forehead, and towards the vertex. He was immediately obliged to quit his employment and return home, where he discovered that the tumour had increased in size to a surprising extent, and that it pulsed with great violence. He suffered dreadfully for the next three nights, not sleeping, or even being able to lay down his head. He was then attacked with hoarseness, which amounting at times to nearly a total loss of voice, alarmed him so much as to cause him to apply at the hospital for relief, and he was admitted on the day above specified.

On the 22nd September, the operation of tying the common carotid was performed. As the space between the tumour, and the clavicle was extremely limited, I made a transverse incision at the root of the neck, parallel to, and above this bone, commencing internal to the superficial jugular vein, and extending forwards about two inches in length. Having thus exposed the sterno-mastoid muscle, I divided its clavicular attachment cautiously on a director, and came down on a very strong and resisting fascia, which, having slightly torn with the forceps, I also divided on the director. The edge of the sterno-hyoideus muscle could now be distinctly seen, which being carefully divided, I tore the sheath of the vessels partly with the nail of the fore-finger and partly with the end of the director. The vessel was now exposed, and although the wound was deep, I could easily pass the needle I generally use, and of which I have given a description on a former occasion, round the artery, which was tied as tightly as I could draw the ligature. During the operation I experienced no inconvenience from the jugular vein : I might almost say I never saw it. I certainly saw the pneumogastric nerve, because I looked carefully for it ; but the pleura

did not rise up in the neck, as I have experienced on other occasions. Altogether there was much less difficulty in the operation than might be anticipated ; the patient bore it well : was but twenty minutes on the table, and walked up stairs to his ward afterwards, refusing any assistance. On the ligature being tied, the usual phenomena occurred ; the pulsation ceased in the tumour : it became diminished in size ; and the patient declared himself relieved from pain.

I had mentioned in my clinical lecture on this case, that I anticipated a return of the pulsation in the tumour at an early period after the operation, and the suppuration of the sac at one more remote. In the former of these expectations I was disappointed ; pulsation did not return, although the tumour remained soft, and its contents evidently fluid. As to the full extent of this assertion, however, there may be some exception taken. Mr., now Sir Philip Crampton, who took a great interest in the case throughout, always said that he perceived a weak pulsatile thrill in the tumour ; and on looking at it in profile, I sometimes saw, or fancied I saw, a slight motion corresponding with the action of the heart, like that which might be exhibited by a large swelling in the immediate vicinity of an artery ; but on examining it with the hand, I never could feel a distinct pulsation ; if such existed, therefore, it must have been extremely weak and indistinct.

It is unnecessary to enter minutely into the details of this case, which at first appeared to progress as favourably as could be desired. On the fifteenth day after the operation the ligature came away with the dressings ; and on Saturday, the 20th October, exactly four weeks after the vessel had been tied, I find the Hospital Report to be as follows : " Patient's health is now very good ; he is up all day and walks about the grounds ; sleeps well during the night ; has no pain or uneasiness ; the discharge from the wound daily diminishing in quantity, and assuming a more healthy character." But on Monday, the 22nd, matters began to assume a different aspect. He complained of

pain and stiffness in the neck, with headach, furred tongue, and general constitutional derangement. The sac had begun to inflame. On Saturday the 27th, (five weeks after the operation,) "the pain and swelling of the neck had greatly increased; the skin tense and shining, of a deep red colour over the centre of the tumour, more faint towards its border; the apex soft and elastic, with a distinct sense of fluctuation: he described the pain as being most excruciating, and of a hot and throbbing character. He had intense head-ach; foul tongue; bowels obstinately costive; pulse 96, hard and full. He also suffered from constant cough, difficult respiration, and painful deglutition. The sac had suppurated, but as this was an occurrence which had frequently taken place in my experience before, I acknowledge it occasioned me little uneasiness, and I prepared to treat the case in the manner I had treated others with uniform success.

I made a free incision into the tumour with a view to discharge the matter, turn out all the coagula, and then by applying pressure externally, seek the obliteration of the sac. The incision gave exit to a large quantity of pus mixed with *fluid blood*, and I found I had opened into a large cavity which scarcely contained any coagulum at all. I laid down the sides of the wound and endeavoured to apply pressure by means of compresses retained by numerous straps of adhesive plaster. This latter indication, however, could not be accomplished. Direct pressure caused an intolerable sense of suffocation, and the consequence was, that under the moderate degree employed, the sac suppurated freely, and the discharge became profuse. Still I imagined I had no cause for apprehension beyond the wearing and wasting hectic that would probably be established; and was therefore surprised at being called at 3 o'clock on the morning of the 30th, with information that my poor patient was bleeding profusely from the wound I had made in opening the abscess. I hastened to the Hospital, and found him literally bathed in blood; and, notwithstanding the exertions of a most active and intelligent

pupil who was resident there at the time, he must have lost between forty and fifty ounces. The bleeding was kept under by the pressure of this gentleman's hand, but immediately on its being removed, the blood spouted forth with considerable force. On examining the cavity, with the aid of a very imperfect light, I discovered several streams of arterial blood passing in different directions through a broken clot at the bottom of the sac, and my first impression was, that some branches opened into and communicated with the cavity; and as the man must have died of hæmorrhage, whilst I should be endeavouring to secure these, I determined on trying to place the patient in the same condition as if the sac had never been opened, and trusting to the pressure of the coagulated blood for the suppression of the hæmorrhage and the obliteration of the vessels. I therefore passed four needles through the lips of the wound, and applied the twisted suture, which held them firmly together, and effectually stopped the bleeding, and I left my patient safe for this time, but pale, weak, sunken, and evidently unable to bear the loss of more blood.

Friday, the 2nd October. The blood burst out again, welling up profusely from the bottom of the wound, but coming without impetus. As I had now the advantage of the assistance of my colleague, Mr. M. Collis, I determined to explore the cavity, with the view of securing the bleeding vessel or vessels, and if possible preventing any further loss of blood. I opened the full extent of my incision, and began to clear out the cavity, when the blood burst forth in a stream, equally frightful and uncontrollable, flowing from a rent in the vessel that my finger could not cover. In this predicament not a moment was to be lost. The patient had lost so much blood, that a single minute would probably decide his fate. As for seeking to tie a vessel lying at the bottom of an enormous cavity, and fully at a distance of five inches from the surface, it appeared to be wholly out of the question; and the vicinity of the pneumo-gastric nerve and the deep jugular vein, rendered a plunge of the

needle or the employment of the actual cautery equally objectionable. I had no resource but to fill this enormous cavity with compresses of sponge, which should be maintained in their places by closing the integuments over them, and this latter could only be effected by means of needles and the twisted suture. Straps of adhesive plaster were totally useless; glue spread on leather was tried, and found equally inefficacious: nothing remained but to stitch the wound in the manner specified, and it certainly had the effect of perfectly restraining the bleeding for the time being. However, I knew that there could be no permanent benefit derived. I knew from the examination I was enabled to make, that the blood proceeded from the original aneurismal rent, that the artery which was not affected by the usual processes of nature during the five weeks that intervened between the operation and the suppuration of the sac, would scarcely become obliterated under the pressure of the sponge, and that the needles must ulcerate the parts and cut their way out long before any permanent benefit could be achieved. Immediately on the wound being perfectly closed, the pulsation, which had disappeared, or been so weak as to be only perceptible to the most delicate touch, returned in the tumour as vividly and as violently as before the operation had been performed at all.

It would be tedious to dwell on the minute reports of this awful and melancholy case; suffice it that the patient still continued to bleed at intervals. According as a needle would separate or a compress be disturbed, blood would burst forth with greater or less violence, and although the hæmorrhage was always promptly restrained, yet, these successive losses, in conjunction with pain, loss of sleep, and extreme anxiety, reduced him so low, that he expired, without a struggle, on the evening of the 12th October—having lived thirteen days from the first appearance of the bleeding. Every effort was made to procure a *post mortem* examination, but in vain, and I have been left to speculation to account for the singular phenomena, and unexpected results that attended this most interesting and important case.

But it is not altogether without a parallel, and after some research I have discovered a case which will throw additional light on these cases of aneurism of the carotid artery.

On the 15th April,* 1831, Mr. Green, in St. Thomas's Hospital, tied the common carotid for the cure of an aneurism situated (as he believed) at the point of its division. The patient was a man advanced in life, being 65 years of age: the tumour had existed from the preceding Christmas, was slow of growth, and had attained only to the size of a walnut; in other respects the symptoms detailed bear a strong resemblance to those observed in the case just related. On the ligature being tightened, a manifest and instantaneous diminution of size took place in the tumour and in the force of pulsation, which was yet distinguishable; but the patient having been carefully removed to bed, in about an hour this had ceased altogether. It is worthy of remark that doubts were entertained by many who carefully observed the case, as to whether the pulsation ever ceased completely.

"On the twenty-fourth day the ligature separated, the noose thereof being perfect and firm, and the dressings having been applied to the wound daily. This has some exuberant granulations, not occupying more than half an inch, which have been touched with *argentum nitratum*. A feeble pulsation has been constant since the 20th April, (the fifth day after the operation,) and we are of opinion that it has latterly been more vigorous; the tumour itself is very materially diminished, but not to the degree that, at this distance of time from the obliteration of the canal of the vessel, we should reasonably expect."

"May 31st. Arterial pulsation has become more distinct in the tumour, but is yet weak. It is supposed, from the situation of the latter, (at the bifurcation of the common carotid,) which is favourable to such, that a communication exists in that part, between the external and internal divisions."

* For the details of this case, see Dr. Johnson's *Medico-Chirurgical Review* for April, 1832, (No. 32,) page 520.

" June 14th," (two months after the operation.) " The aneurismal sac has grown larger within the last fortnight, and the pulsation remains equally, if not more powerful."

" July 28th. Patient is suffering from suppuration of the right tonsil ; a diffused swelling has taken place externally upon the neck, a little below the angle of the jaw. The tonsil was opened, and discharged pus freely."

" September 20th. The above local symptoms subsided in due course, but the aneurismal swelling retains the same trifling pulsation."

I have merely extracted from the printed report of the above case, the points in which it bears some resemblance to that of my patient, and which seem to have some reference to the locality of the disease. It was supposed by Mr. Green to exist at the bifurcation of the carotids, a spot equally favourable with the internal itself, for the return of pulsation through the medium of the cerebral circulation. This pulsation did return, and according to the opinion of some, never totally disappeared. About the 28th July, symptoms occurred which might have been occasioned by the suppuration of the sac, and at the end of five months pulsation remained ; the disease had not been cured. The case seems to hold a middle place between that of Elizabeth Rourke, in which the progress of the disease was extremely slow, and the contents of the sac nearly solid, and that of Markey, which had proceeded so very rapidly, and in which there was probably no coagulum at all. It is to be regretted that the appearances of the tumour, in relation to the mouth and pharynx, were not described, and its ultimate result not ascertained.

Thus far, however, I have endeavoured to show that aneurisms of the internal carotid are unfavourably placed for the accomplishment of one part of the cure ; that a ligature on the trunk does not entirely cut off the impulse of the heart from the diseased vessel ; that such impulse may be conveyed through the circulation of the brain in its normal state ; and that the ef-

fect of this impulsæ must be, to disturb the blood within the sac, and delay, if it does not prevent, its coagulation. I have now to direct my attention to another circumstance of, at least, equal importance. In a limb, when the aneurismal sac becomes distended with blood after operation, the pressure exercised thereby must be directed against the injured vessel ; the structures external to, and surrounding such sac are, many of them, inelastic, all more or less resisting ; they will not permit a growth or extension of the tumour in any direction towards them, and consequently when the sac is filled, and more particularly when its contents are solidified, it must not only press against the ruptured vessel, but compress it to an extent and degree to occasion its obliteration. But with respect to the internal carotid, the case is widely different. However covered with fascia, and muscle, and skin, and other resisting structures externally, it is wholly unprotected in the direction of the pharynx, for, on making a vertical section of the head and neck, and dissecting from within outwards, I find that the internal carotid is very close to the pharynx. In its passage upwards, from the bifurcation to its entrance into the skull, it obliques slightly backwards and inwards, having behind it the sympathetic nerve and first cervical ganglion, where it rests against the spine : external it has the styloid process, the three styloid muscles, the digastric, the mastoideus, and the different layers of fascia ; a little in front it has the stylo-pharyngeus muscle, but internally, or towards the pharynx, it has nothing but the mucous membrane, the constrictor of the pharynx, some very loose cellular tissue, and the twigs of the superior laryngeal nerve ; thus the aneurismal sac has ample room to grow and increase inwardly, and consequently the pressure it is forced to make on the opening in the vessel may be so trifling, as not in any way to lead to its obliteration. This circumstance may explain (although in Mr. Green's case it does not appear that the mouth and pharynx were ever examined) why that case proved to be what Scarpa might term an imperfect cure, and why in the case of Markay, in five weeks after the

vessel was tied, and the direct force of the heart cut off, there should have been no advance whatever in the process by which the artery might be obliterated. It appears curious that the position of this vessel, with respect to the pharynx, should not have attracted more attention in the examination of aneurismal tumours ; for, reasoning from the anatomy of the parts, I should be disposed to believe that the symptoms of pulsation would always be most clearly observed from within. It was so in the present case, and I have since had an opportunity of seeing it under circumstances where it might be still less expected or looked for.

A young girl named E—— M—— was admitted into the Meath Hospital, with a varicose aneurism situated at the angle of the jaw, and extending downwards a short way along the course of the external jugular vein. It became very large and prominent when pressure was made on this vessel below, so as to interrupt the current of blood ; it became then excessively painful, and exhibited the usual thrilling sensations, both to the finger and the ear ; but when looked at from the mouth, a strong and continued pulsation, together with considerable tumefaction, was obvious to every eye. This disease had been produced by a stab of a scissors, inflicted seven years before, and no very decisive treatment was adopted for it in hospital ; in fact, the exact nature of the lesion was not understood, and it was only matter of conjecture, that a communication had been established between the external jugular vein and the internal carotid artery, with the intermediate existence of a varicose aneurismal sac. The case, however, is pathologically interesting, as affording an illustration of the facility with which such tumours may grow and increase internally or towards the mouth.

Whilst on this subject, I may be permitted to notice a circumstance in the case of Markay, in explanation of which, I confess myself unable to form even a remote conjecture. Why did the blood remain in a fluid state within the sac during five weeks ? Before the artery was tied, and whilst a large current

was forced into the sac with the full strength of the heart's action, it is not difficult to conceive that such constant and violent motion might interfere with the process of coagulation ; but that after such an interval, the blood, with the exception of one or two very small coagula, at the bottom, should have been found perfectly fluid, was scarcely to have been expected, and must have had a very unfavourable influence on the success of the operation. Yet such was the case, and it is no easy matter to explain why it should have been so. But the difficulty of solution attendant on this question, leads me to propose another. Is there a pathological difference in the blood of different individuals, giving to that of one a greater or less tendency or disposition to coagulate, than to that of another ? If there is such a difference of condition or constitution, a knowledge of the fact, and more particularly of the causes or circumstances that lead to its production, might prove of incalculable benefit in the management of disease in general, but more particularly those of the circulating system. And that there is such a difference, I am strongly disposed to believe, although being totally unprepared with satisfactory proofs, I dare not offer it even as an hypothesis—but rather as a suggestion that may lead others (as opportunity may offer) to investigate the pathology of the blood as promising to lead to invaluable practical results. That the blood of individuals suffering from different diseases, will exhibit different phenomena in the quickness with which the coagulum is formed, and the degree of firmness and solidity it reaches, no one will be disposed to deny, but the point to which I wish to direct attention is, that the blood of a person apparently in a healthy state, may not coagulate under circumstances wherein that of another individual would almost certainly do so.

Some years ago, a man was admitted into the Meath Hospital, having received a stab of a sharp-pointed shoemaker's knife about an inch below the right sterno-clavicular articulation, by which the internal mammary artery and vein were wounded. These vessels poured out their blood continually,

and in such abundance into the cavity of the pleura, that the lung became dreadfully oppressed, and it was deemed advisable to perform the operation of paracentesis on the fourth or fifth day after the receipt of the injury. The wound made in the operation was large, in the expectation that it might facilitate the escape of any coagulum, but the precaution was found to have been unnecessary, as the blood had remained in a perfectly fluid state, and flowed away with the greatest facility. The quantity of blood thus lost was enormous: it must have amounted to some quarts: and as the wounded vessels still continued to bleed, it is scarcely necessary to add that the patient soon died. On examination after death, a good deal of fluid blood was found in the cavity of the pleura, but not a particle in a state of coagulation. Is it not reasonable to conclude, that in this case there was some peculiar condition of the blood that rendered it incapable of coagulation? and might not this have been one cause of the continued and unceasing hæmorrhage, without the slightest effort on the part of Nature to arrest it?

On the 5th August, a man named James Wilson was admitted into the Meath Hospital, with an enormous aortic aneurism.

Three months previously he had perceived a tumour of the size of a hazel nut above the clavicle, and close to the sternum, which tumour increased in size daily, enlarging from below upwards: on admission it occupied the anterior and right side of the neck, extending as high as the thyroid cartilage, and slightly displacing the larynx. It pulsated violently. From the symptoms, the history of the case, and careful stethoscopic examination, it was decided that it was an aneurism of the aorta, and that palliative measures only should be adopted. He remained in hospital until the 8th September, when the tumour burst, and the patient died in a few seconds, with an awful gush of blood.

Post Mortem Examination.—On looking at the situation occupied by the tumour during life, it appeared to have shrunk and collapsed, and instead of being elevated, there was a very large cavity, in the centre of which was a dark spot marking the place

at which it had given way. The sac was eight inches in its long diameter by five in the transverse at its widest part, and sprung from the aorta at the root of the innominate, passing up behind the clavicle, which was in part carious. Not a particle of lymph, or fibrine, or coagulum of any description existed in the cavity of this immense sac, although upwards of four months had elapsed since the commencement of the disease, and the tumour had not increased with any very extraordinary rapidity.

From these cases, and from other facts and observations, with which it is unnecessary to swell this paper, already pushed to perhaps a tedious length, I have been led to believe that a condition of blood indisposing to coagulation, may exist in individuals otherwise apparently healthy, and exhibiting no symptom indicative of such an abnormal state. If such an opinion be correct, and if (as is generally conceded) the coagulation is an active agent in the suppression of hæmorrhage, and a necessary part of the process in the cure of aneurism, few subjects can be submitted to the attention of the pathologist of greater apparent importance, or more likely to repay the trouble of investigation.

ART. V.—Appendix to DR. GRAVES'S Report on the Progress of Cholera.

DR. GRAVES feels great pleasure in communicating to the readers of this Journal, the following official Cholera Returns.

The Tables were constructed by the Commissioners appointed to adopt the measures most likely to arrest the progress of cholera in Great Britain, and whose duty it became to watch and record the progress of the disease. This duty they performed with a diligence and accuracy which stand unrivalled, and their labours have succeeded in furnishing a more valuable and accurate history of the march and effects of cholera, than any other country can boast. By the aid of these Tables, any person can

construct a map of the progress of cholera in Great Britain, which will at once exhibit its route and intensity.

These Tables are taken from the official Report presented by the Commissioners to *William the Fourth*, of which Report but one copy existed ; that copy was mislaid, and would have been lost to the world, had not Sir James Clark exerted himself to make it out, and by the aid of the Royal Librarian it was at last found buried amongst an heterogeneous mass of papers in a drawer.

POSTSCRIPT.—It appears from the following account extracted from the *Asiatic Journal* for January, 1840, that cholera accompanied the march of our army from *Hindustan* into *Afghanistan*.

Candahar, August 18th, 1839.—I am sorry to say that most distressing accounts have been just received of the breaking out of cholera at *Quetta* in *Shawl*, where the 2nd brigade is stationed. We heard some time ago that this merciless scourge had followed the heels of our army from Bhawulpore, by Boree and Bukkeer to Shikarpore, and thence across the desert of Cutch Gundava to Bhag and Dadur ; but we were in hopes the Bolan pass and Solyman range would have checked its progress ; I am sorry to say we have been disappointed, and cholera is making sad havoc among the troops.

CHOLERA RETURNS IN GREAT BRITAIN.

No. on Map.	Names.	Dates of first Case.	Date of last Case.	No. of Days.	Total Cases.	Total Deaths.	Total Recoveries.	Proportion of Deaths to Cases.	Population.	Proportion of Population attacked.	Per cent.	Proportion of Deaths in Population.
136	Aberavon, (Glamorgan.)	1 August, 1832.	27 Septem. 1832.	58	11	3	8	24	573	2	Per cent.	1-half
205	Aberdare, (Glamorgan.)	23 Oct. "	23 Oct. "	1	2	2	..	100	3,961	1-20th	1-20th	1-20th
136	Aberdeen, N. B.,	27 August, "	31 Dec. "	122	251	99	152	40	32,912	1 1-3rd	1 1-3rd	5-16th
212	Abergavenny, (Monmouth.)	30 Nov. "	16 Dec. "	17	22	2	20	9	3,940	5-8th	5-8th	1-20th
119	Acomb, Northumberland,	10 July, "	27 August, "	48	12	3	9	25	533	2 1-4th	1-4th	1-half
60	Airdree, Lanark, N. B.,	12 April, "	19 April, "	8	10	7	3	70	4,860	1-5th	1-5th	1-7th
170	Alcester, Warwick,	8 Sept. "	15 Oct. "	37	14	1	13	7	2,405	5-8th	5-8th	1-10th
66	*Alloa, (Clackmannan,) N. B.,	25 Sept. "	21 Nov. "	135	166	72	114	40	6,377	2 7-8th	2 7-8th	1 1-8th
204	Allonby, Cumberland,	23 Oct. "	17 Nov. "	25	9	4	5	40	709	1 1-3rd	1 1-3rd	4-7th
146	Alphington, Devon,	11 August, "	19 Sept. "	39	9	2	7	25	872	1	1	1-4th
202	Andrew's, St., Fife, N. B.,	20 Oct. "	22 Oct. "	26	15	10	5	68	4,899	1 1-half	1 1-half	1
163	Anstruther, Fife, N. B.,	1 Sept. "	26 Sept. "	61	69	34	35	50	1,007	2 1-4th	2 1-4th	1 1-8th
148	Antony, Cornwall,	13 August, "	13 Oct. "	1	2	2	..	100	830	1-4th	1-4th	1-4th
193	Anworth, (Kirkcudbright, N. B.)	6 Oct. "	6 Oct. "	36	23	13	10	52	6,660	1-3rd	1-3rd	1-5th
141	Arbroath, Forfar, N. B.,	6 August, "	10 Sept. "	55	20	9	11	48	6,624	3-8th	3-8th	1-4th
140	Ardswick, Lancashire,	5 August, "	27 Sept. "	5	4	2	2	50	3,144	1-8th	1-8th	1-16th
113	Asaph, St., Flint,	4 July, "	8 July, "	46	118	44	74	48 1/2	4,165	2 7-8th	2 7-8th	1 1-16th
124	Ashburton, Devon,	14 August, "	29 Sept. "	63	79	27	52	34	3,741	2 1-4th	2 1-4th	3-4th
188	Attercliffe, York,	16 July, "	17 Sept. "	18	31	12	19	40	1,966	1 5-8th	1 5-8th	5-8th
171	Avock, Ross, N. B.,	30 Sept. "	13 Oct. "	35	12	7	5	60	3,182	5 1-4th	5 1-4th	1 1-4th
171	Auchtermarder, Perth, N. B.,	17 June, "	30 July, "	44	259	60	199	28	4,907	5 1-4th	5 1-4th	1 1-4th
98	Aylesbury, Bucks,	17 June, "	18 Oct. "	91	436	190	246	44	7,606	5 3-4th	5 3-4th	2 1-half
127	Ayr, N. B.,	20 July, "	9 Oct. "	37	75	28	47	38	2,041	3 3-4th	3 3-4th	1 2-5th
165	Balfour, Sterling, N. B.	3 Septem. 1832.	18 Oct. "	29	27	19	23	14	1,605	1 5-8th	1 5-8th	1-4th
204	Bampton, (Oxon.)	22 October, "	9 Novem. "	37	27	23	98	19 1/2	417	28 1-half	28 1-half	5 3-4th
208	Bamburgh, (Northumberland.)	1 Novem. "	20 Decem. "	50	121	3	8	27	1,387	7-8th	7-8th	1-4th
150	Barton, (Staffordshire.)	15 August, "	15 August, "	1	11	3	8	27	720	1 1-half	1 1-half	2-7th
200	Barton, (Bedfordshire.)	17 October, "	26 Oct. "	10	10	2	8	20				

No. on Map.	NAMES.	Date of first Case.	Date of last Case.	No. of Days Duration.	Total Cases.	Total Deaths.	Total Recoveries.	Proportion of Deaths to Cases.	Population.	Proportion of Population attacked.	Proportion of Deaths in Population.
								Per cent.		Per cent.	Per cent.
167	Barking, Essex.	5 Septem. 1832.	42 Septem. 1832.	20	46	18	28	38	8,036	5-8th	1-4th
162	Barnum, Kent.	31 August.	19 Oct.	41	70	13	57	17½	665	12-18th	2-14th
118	Basford, Knotts.	9 July.	10 Oct.	103	28	8	20	89	379	7-8th	2
134	Bath, Somerset.	28 July.	26 Oct.	80	74	49	25	62	38,063	3-16th	1-8th
68	Bathgate, Linlithgow, N. B.	1 May.	1 May.	1	6	4	2	66	3,593	1-6th	1-9th
171	Bedford.	9 Sept.	27 Nov.	80	81	36	45	45	6,959	1-3-16th	1-half
171	Bedworth, Warwick.	9 Sept.	27 Nov.	80	92	26	66	30	3,980	2-1-3rd	1-3rd
126	Beniley, York.	19 July.	27 August.	50	24	12	12	50	1,144	2	1
135	Berkhamstead, Herts.	30 July.	5 August.	7	9	4	5	45	2,369	3-8th	1-6th
173	Berwick, Northumberland.	24 January.	16 Feb.	24	16	7	9	45	1,824	7-8th	3-8th
173	Berwick-upon-Tweed.	11 Sept.	8 Nov.	60	172	84	88	48	8,920	1-7-8th	15-16th
149	Bewdley, Worcestershire.	14 August.	19 Nov.	98	60	15	45	25	3,908	1-1-half	3-8th
80	Bexley, Kent.	23 May.	12 Oct.	23	12	5	7	45	3,206	3-8th	1-6th
88	Bicester, (Oxon.).	7 June.	27 July.	51	196	64	132	33	2,868	7	2-3-8th
114	Billerica, Essex.	6 July.	8 July.	4	8	4	4	60	1,977	3-8th	1-6th
139	Bilston, Staffordshire.	4 August.	29 Sept.	57	2,250	693	1,557	31	14,492	1-1-half	4-7-8th
116	Birmingham, Warwick.	7 July.	6 Nov.	128	81	21	10	70	146,986	1-60th	1-150th
165	Bishopsthorpe, York.	3 Sept.	3 Sept.	1	2	2	..	100	301	3-4th	3-4th
201	Bishop's Stortford, Herts.	18 Oct.	18 Oct.	1	1	1	..	100	3,958	1-40th	1-40th
86	Blackthorne, Oxon.	5 June.	30 July.	56	81	22	59	27	393	20-1-8th	5-14th
158	Blythe and Cowpen, York.	24 August.	1 Nov.	70	142	42	100	30	1,806	7-3-4th	2-1-6th
157	Bolton, Great, Lancashire.	23 August.	29 Sept.	38	26	12	14	47	28,299	1-10th	1-24th
172	Bolton, Little, "	10 Sept.	6 Oct.	27	8	4	4	50	12,896	1-16th	1-32nd
106	Bonhill, Dumbarton, N. B.	27 June.	15 Oct.	111	42	13	29	36	3,874	1-1-8th	3-8th
119	Boston, Lincolnshire.	10 July.	4 Oct.	87	8	6	2	75	11,240	1-14th	1-18th
42	Bothkennar, Sterling, N. B.	10 March.	7 May.	59	26	10	16	40	905	2-15-16th	1-1-8th
167	Bradford, York.	5 Sept.	26 Oct.	52	114	30	84	23	23,233	1-half	1-8th
151	Bridport, Dorset	16 August.	8 Sept.	24	35	16	19	48	4,242	7-8th	3-8th

No. on Map.	NAMES.	Date of first Case.	Date of last Case.	No. of Days Duration.	Total Cases.	Total Deaths.	Total Recoveries.	Proportion of Deaths to Cases.	Population.	Population attacked.	Proportion of Deaths in Population.
185	Brinnington, Cheshire, . . .	26 Sept. 1832.	23 October, 1832.	28	11	6	6	58	2,142	Per cent. 1-half	Per cent. 1-half
180	Bricklow, Warwickshire, . . .	20 Sept. "	5 Oct. "	16	13	4	9	34	757	1 5-8th	1-half
124	Bristol, . . .	16 July, "	23 Nov. "	141	1,612	626	986	39	103,886	1 3-16th	9-16th
124	Do. St. James's and St. Paul, . . .	15 Aug. "	5 Sept. "	22	7	4	3	57	19,634	1-28th	1-49th
132	Bromley, Kent, . . .	26 July, "	31 Oct. "	98	10	6	4	60	4,002	1-4th	1-8th
153	Bromsgrove, Worcestershire, . . .	18 Aug. "	27 Sept. "	41	94	18	76	18	8,612	1 1-10th	1-6th
123	Bronwich, West Staffordshire, . . .	15 July, "	21 Sept. "	69	279	59	220	18	15,327	1 13-16th	3-8th
196	Budleigh, East Devon, . . .	11 Oct. "	11 Oct. "	1	1	1	..	100	1,706	1-17th	1-17th
148	Buckland, Monochoran, Devon, . . .	13 Aug. "	2 Sept. "	21	6	2	4	33	1,274	1-half	3-16th
168	Buckfastleigh, Devon, . . .	6 Sept. "	21 Sept. "	24	61	17	34	33	2,445	2 1-8th	3-4th
157	Bulwell, Notts, . . .	30 Aug. "	18 Sept. "	20	106	26	80	25	2,105	5	1 1-4th
193	Burntisland, Fife, N. B., . . .	6 Oct. "	1 Dec. "	27	26	13	13	50	2,366	1 1-8th	1-half
131	Bushey, Herts., . . .	27 July, "	27 July, "	1	8	3	5	37	1,586	1-half	1-5th
65	Butterwick, West Lincolnshire, . . .	27 April, "	27 June, "	62	9	5	4	51	504	1 4-5th	1
191	Buxham, Devon, . . .	4 Sept. "	6 Nov. "	64	154	31	123	20	6,015	3 1-12th	5-8th
166	Caerleverock, Dumfries, N. B., . . .	5 Oct. "	3 Nov. "	30	21	15	6	70	1,271	1 1-half	1 1-4th
160	Callington, Cornwall, . . .	27 Aug. "	30 Aug. "	4	3	2	1	66	1,388	1-4th	1-7th
64	Campbeltown, Argyll, N. B., . . .	17 April, "	2 June, "	47	13	10	3	74	9,472	1-7th	1-9th
184	Camborne, Cornwall, . . .	25 Sept. "	23 Dec. "	90	33	15	18	45	7,699	6-16th	3-16th
95	Carlisle, Cumberland, . . .	13 June, "	21 Nov. "	162	448	265	183	57	20,006	2 1-4th	1 5-8th
199	Carnarvon, . . .	15 Oct. "	29 Nov. "	46	78	30	48	37	7,642	1 1-16th	3-8th
188	Cariden, Linnithgow, N. B., . . .	30 Sept. "	26 Oct. "	27	30	13	17	42	1,261	2 1-half	1
106	Castleford, York, . . .	27 June, "	2 Oct. "	68	40	12	28	30	1,022	4	1 1-6th
53	Cathcart, Lanarkshire, N. B., . . .	2 April, "	13 Nov. "	153	34	19	15	56	2,282	1 1-half	7-8th
86	Cawood, York, . . .	5 June, "	9 July, "	35	77	15	62	20	1,173	6-8th	1 3-8th
18	Cawston Norfolk, . . .	18 May, "	29 June, "	43	67	17	40	32	1,110	6 1-8th	1 1-8th
165	Charmouth, Dorset, . . .	3 Sept. "	26 Sept. "	24	3	3	..	100	724	3-8th	3-8th
97	Chelmsford, Essex, . . .	16 June, "	4 July, "	19	21	10	11	49	5,435	3-4th	3-8th

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120	Chester, ...	12 July, 1832.	8 Septem. 1832.	59	20	14	6	73	21,363	Per cent. 1-4th	Per cent. 1-15th
156	Chippenhams, Wilts, ...	22 August, "	29 Sept. "	39	20	9	11	36	4,333	7-16th	3-16th
121	Chorlton on Medlock, Lancashire, ...	13 July, "	11 Oct. "	61	76	32	44	43	624	12	5
153	Chudleigh, Devon, ...	18 August, "	4 Sept. "	18	6	5	1	85	2,278	5-16th	13-4th
55	Clackmannan, N. B.	5 April, "	13 Nov. "	223	323	75	248	23	4,266	7 5-8th	1 3-4th
191	Cleethorpe, Lincolnshire, ...	4 October, "	4 Oct. "	1	3	1	2	33	497	3-5th	1-5th
150	Clifton, Gloucestershire, ...	15 August, "	7 Sept. "	24	196	64	132	32	8,811	2 1-4th	3-4th
142	Cockermouth, Cumberland, ...	7 August, "	4 Sept. "	29	33	25	8	75	3,790	7-8th	11-16th
18	Coldstream, Berwick, N. B.	25 Jan. "	29 March, "	65	117	41	76	35	2,897	4	1 3-8th
16	Colliery, and other Villages around Newcastle, ...	16 Feb. "	12 April, "	57	1,598	259	1,339	16½	..	..	..
203	Conisboro, York, ...	21 Oct. "	22 Nov. "	33	27	15	12	55	1,142	2 1-half	1 1-3rd
154	Covenry, Warwick, ...	20 August, "	18 Nov. "	91	41	18	23	46	27,070	3-16th	1-16th
182	Cromarty and Roslin, N. B.	24 Sept. "	1 Nov. "	39	45	11	34	25	4,371	1	1-4th
170	Cuddenden, Oxon, ...	8 Sept. "	4 Oct. "	27	16	4	12	25	1,328	1 3-16th	3-16th
149	Cupar, Burgh, Fife, N. B.	23 August, "	14 Dec. "	114	130	63	67	47½	6,473	3 1-half	1 3-4th
67	Cupar, Angus, Leith, ...	14 August, "	30 Dec. "	139	92	45	47	50	2,615	7-8th	5-8th
84	Cutham, Oxford, ...	26 April, "	4 June, "	40	23	17	6	75	207	6 1-half	1 1-half
15	Dalkeith, Edinburgh, ...	4 June, "	30 June, "	27	13	3	10	25	5,169	1-10th	1-13th
175	Dalry, Ayr, N. B.	20 Jan. "	4 Feb. "	16	5	4	1	89	1,246	4 3-8th	1 3-4th
153	Darlston, Staffordshire, ...	15 August, "	19 Oct. "	66	53	22	31	40	6,647	15-16th	7-8th
54	Darlington, Durham, ...	18 August, "	29 Sept. "	43	127	57	70	45	5,750	1-10th	1-20th
139	Dartmouth, Devon, ...	2 April, "	27 April, "	26	6	3	3	50	4,485	7 1-6th	1 1-10th
163	Dawley, Salop, ...	4 August, "	12 Nov. "	100	322	49	273	15	5,147	1-16th	1 1-16th
118	Devonport, Devon, ...	30 October, "	24 Nov. "	26	3	3	..	100	34,883	1 5-16th	11-16th
110	Denver, Norfolk, ...	9 July, "	27 Oct. "	111	455	238	227	50	850	10 3-8th	3 3-8th
102	Derby, ...	1 July, "	23 July, "	24	88	27	61	28½	23,607	1-8th	1-16th
		24 June, "	3 Dec. "	86	32	16	16	50			

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91	Denbigh, N. Wales,	1832.	21 July,	42	105	47	58	42	3,786	Per cent. 2 3-4th	1 1-4th
183	Dewbury, York,	"	27 Oct.	34	23	12	11	52	8,272	5-16th	10-16th
139	Dingwall, Ross, N. B.,	"	18 Oct.	76	38	17	21	40	2,124	1 3-4th	13-16th
101	Dover, Kent,	"	23 June,	20	15	10	5	66	11,924	1-8th	1-12th
161	Donnington Castle, Leicester,	"	26 Sept.	29	12	5	7	41	3,182	3-8th	1-6th
106	Douglas, Isle of Man,	"	20 Sept.	106	276	146	130	53	6,054	4 5-8th	2 7-16th
111	Doncaster, York,	"	10 Jan.	49	112	26	86	23	10,801	1 1-27th	1-4th
130	Droitwich, Worcester,	"	10 Sept.	49	228	63	165	27 1/2	2,487	9	2 5-8th
51	*Dudley, Worcester,	"	3 Dec.	157	1,228	277	951	22 1/2	23,043	5 3-8th	1 1-5th
49	*Duddingstone, Edinburgh,	"	30 March,	102	105	52	53	50	397	25	12 1-half
38	*Dumbarton, N. B.,	"	9 March,	147	108	67	41	62	3,623	3	1 7-8th
177	Dunbar, including	"	17 Sept.	37	67	38	29	55	5,272	1 1-4th	3-4th
"	Haddington, and West Barns, N. B.,	"	4 Feb.	25	835	418	417	50	11,606	7 1-5th	3 3-4th
175	Dumfries, N. B.,	"	15 Sept.	88	808	512	296	63	45,355	1 13-16th	1 1-8th
65	Dumfries, Forfar, N. B.,	"	27 April,	207	11	1	1	100	936	1-10th	1-10th
186	Dyffron, Glamorgan,	"	28 Sept.	157	98	39	59	40	6,259	1 5-8th	5-8th
123	Droitart, Fife, N. B.,	"	15 July,	8	3	2	1	62 1/2	837	3-8th	1-4th
134	East Church, Kent,	"	18 Dec.	20	55	13	42	27	2,176	2 1-half	5-8th
90	Eccleshill, York,	"	4 Aug.	1	16	11	5	65	8,192	1-5th	5-16th
187	Edmonton, Middlesex,	"	29 Sept.	1	1	1	1	100	1,029	1-10th	1-10th
211	Elie, Fife, N. B.,	"	15 Nov.	1	1	1	1	100	6,189	2 3-8th	1
45	Ely, Cambridge,	"	8 May,	53	149	61	88	40	162,403	1 9-32nd	9-16th
37	Edinburgh, N. B.,	"	17 March,	340	1,886	1,065	821	56 1/2			
"	Ditto, Water of Leith,	"	26 Dec.	291	125	59	66	49			
"	Ditto, Cannon Mills,	"	24 Dec.	271	43	26	17	58			
"	Ditto, Bonnington,	"	3 Dec.	19	6	3	3	50			
"	* Ditto, Stockbridge,	"	6 April,	29	6	6	..	100			
161	Ensham, Oxford,	"	12 July,	29	56	8	48	14 1/2	1,858	3	3-8th
163	Eath, St., Cornwall,	"	25 Sept.	28	12	6	6	50	1,922	5-8th	5-16th
126	Exeter, Devon,	"	17 Sept.	18	136	347	789	30 1/2	28,201	4	1 3-16th
		"	4 Dec.	75							

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126	Exeter, St. Thomas,	31 July, 1832.	8 Nov. 1832.	101	276	39	237	27½	4,203	6 1-half	7-8th
30	Falkirk, Stirling,	20 Feb. "	15 May, "	86	69	31	38	45	12,473	5-8th	1-4th
205	Farley, Wilts.,	23 Oct. "	28 Oct. "	6	12	5	7	41	174	7	3
186	Faringham, Kent,	28 Sept. "	6 Oct. "	9	10	6	4	60	701	1 3-8th	7-8th
150	Farnworth and Keanley, Lancashire,	15 Aug. "	20 Oct. "	67	20	1	19	5	3,877	1 3-8th	1-39th
113	Fenstanton, Hants,	4 July, "	1 Aug. "	29	60	21	39	35	968	6	2 1-3rd
71	Flint, N. W.,	7 May, "	30 June, "	55	37	18	19	50	2,216	1 5-8th	13-16th
112	Floodery Farrah, Ross, N. B.,	3 July, "	20 Aug. "	49	4	3	2	50	2,392	1 5th	1-11th
156	Foleshill, Warwick,	22 Aug. "	12 Nov. "	83	134	32	102	24	6,969	1 15-16th	15-32nd
160	Fortrose, Ross, N. B.,	25 Aug. "	2 Sept. "	9	7	2	5	30	932	3-4th	1-5th
176	Frampton, Gloucester,	16 Sept. "	16 Sept. "	1	12	2	10	16½	688	1 3-4th	1-4th
88	Gainaboro', Lincoln,	7 June, "	5 Aug. "	60	233	41	182	18½	6,638	3 3-8th	5-8th
36	Garvald, Haddington, N. B.,	5 March, "	19 March, "	15	3	1	2	33	797	3-8th	1-8th
9	Gatehead, Durham,	26 Dec. 1831.	5 March, "	71	407	148	259	36½	15,177	2 3-4th	15-16th
142	Gatehouse of Fleet Kircudbright, N. B.,	7 Aug. 1832.	17 Aug. "	11	6	3	3	50	831	3-4th	3-8th
23	Glasgow, N. B.,	6 Feb. "	7 Feb. "	2	1	..	1	..	1,658	1-16th	..
24	Glasgow, N. B.,	12 Feb. "	4 Nov. "	267	6,198	2,994	3,204	48½	202,426	1-32nd	1-64th
	Ditto, Bunby,	20 March, "	21 April, "	32	16	8	8	50			
	Ditto, Balleston,	25 March, "	6 March, "	5	12	4	8	33			
	Ditto, Burhead,	25 Feb. "	15 April, "	51	2	1	1	50			
	•Ditto, Pollokshaws,	10 March, "	8 Nov. "	136	292	143	149	49			
	Ditto, Maryhill,	14 Feb. "	28 March, "	44	61	24	37	40			
129	Gloucester,	11 July, "	22 Sept. "	74	366	123	243	32	11,923	3 1-12th	1 1-30th
55	Goole, York,	5 April, "	2 June, "	59	96	36	60	38	450	21 1-half	8 1-half
212	Gosport, Hants,	30 Nov. "	7 Dec. "	8	5	5	..	100	6,184	1-12th	1-12th
33	Govan, Renfrew,	1 March, "	27 July, "	149	192	77	115	40	4,967	3-4th	1 1-half
60	Grangemouth, Sterling, N. B.,	12 April, "	27 June, "	77	34	8	26	24	3,018	1 1-8th	1-4th
32	Greenock, Renfrew,	29 Feb. "	30 Oct. "	244	800	436	414	50½	27,571	3 1-16th	1 9-16th
123	Great Grimsby, Lincoln,	15 July, "	15 Oct. "	1	6	1	5	16½	4,225	1-8th	1-42nd
135	Great Gt. N. B.,	30 July, "	30 July, "	1	7	2	5	30	235	3	1

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8	Haddington, N. B.	25 Dec. 1831,	28 May, 1832,	149	139	65	74	45	5,883	23-8th	..	11-16th
178	Hales Owen, (Salop.)	18 Sept. 1832,	18 Sept. "	1	1	1	..	100	11,839	..	..	..
178	Halifax, York.	18 Sept. "	18 Sept. "	1	1	1	..	100	15,382	..	..	..
105	Hamilton, Lanark, N. B.	26 June, "	3 Sept. "	70	107	51	56	48½	7,613	13-8th	..	11-16th
98	Hampall, York.	17 June, "	1 Aug. "	46	9	5	4	55	140	6	..	31-8th
189	Hanwell, Middlesex, Lunatic Asylum,	1 Oct. "	18 Oct. "	18	20	10	10	50	1,213	15-8th	..	7-8th
168	Harborton, Devon.	6 Sept. "	21 Sept. "	16	3	..	3	..	1,584	3-16th	..	..
150	Hartlepool, Cumberland,	13 Aug. "	3 Oct. "	50	11	3	8	31	1,845	5-8th	..	1-6th
173	Hartlepool, Durham,	13 Sept. "	21 Sept. "	9	182	54	128	30	1,330	14	..	4
192	Haverfordwest, Pembroke,	5 Oct. "	28 Oct. "	24	43	16	27	37½	3,915	11-8th	..	3-8th
20	Hawick, Roxburgh, N. B.	3 Feb. "	18 Nov. "	32	96	34	62	35	4,970	11-16th	..	11-16th
160	Headington, Oxon.	27 Aug. "	30 Sept. "	35	16	6	10	40	1,388	11-8th	..	3-8th
139	Heavitree, Devon.	4 Aug. "	17 Sept. "	45	14	1	13	7	1,932	13-16th	..	1-20th
194	Heaton Norris, Lancashire,	7 Oct. "	7 Oct. "	1	8	..	8	..	6,958	3-32nd	..	..
88	Hellensburgh, Dumbarton, N. B.	7 June, "	5 Sept. "	91	9	6	3	66	1,343	3-4th	..	1-half
171	Henly-upon-Thames, Oxfordshire,	9 Sept. "	3 Dec. "	86	40	8	32	20	3,509	11-8th	..	3-16th
81	Hertford,	27 May, "	5 July, "	40	23	15	8	75	5,427	7-16th	..	5-16th
5	Hetton and Houghton Le Spring, Dur-											
	ham,	1 Dec. 1831,	3 March, "	94	488	97	391	20	3,914	12 1-half	..	2 1-half
99	Hickling, Norfolk,	18 June, 1832,	3 Aug. "	47	18	8	10	47½	762	23-8th	..	1 1-16th
87	Holywell, Flint,	5 June, "	21 June, "	16	5	5	..	100	8,969	1-18th	..	1-18th
153	Honiton, Devon.	18 Aug. "	21 Sept. "	35	12	7	5	58	3,509	3-8th	..	1-5th
186	Horton, York.	28 Sept. "	28 Sept. "	1	1	..	1	..	7,192	1-72nd	..	..
12	Howden, York.	23 May, "	21 July, "	60	19	10	9	47½	2,080	15-16th	..	1-half
62	Hull, York.	14 April, "	2 Nov. "	193	820	300	520	36½	28,591	27-8th	..	1 1-16th
141	Hulme, Lancashire,	6 Aug. "	17 Sept. "	43	29	13	16	42½	4,234	11-16th	..	5-16th
189	Hungerford, Berks.	1 Oct. "	7 Oct. "	7	2	2	..	100	2,283	1-11th	..	1-11th
45	Hutton, Berwick, N. B.,	17 March, "	17 March, "	1	6	1	5	16½	1,099	9-16th	..	1-11th
190	Hutton, Ruddy, York,	3 Oct. "	30 Oct. "	28	47	22	25	42½	919	5 1-half	..	2 1-half
63	Hurlet, Renfrew, N. B.,	27 April, "	20 June, "	55	18	10	8	55	960	2	..	1

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120	Jackfield, Salop, ...	12 July, 1832,	22 Sept. 1832,	73	37	10	27	37 1/2	1,200	3	2	7-8th
29	Jarrow and Hepburn, Durham, ...	16 Feb. "	24 Sept. "	76	263	70	193	27	3,580	3	2	7-8th
72	Inverness Burgh, N. B., ...	9 May, "	4 Nov. "	97	556	177	379	31	14,324	4	1	3-8th
160	Ditto, Landwardpart, ...	3 Oct. "	18 Nov. "	47	60	12	48	20 1/2	1,117	4	1	3-8th
79	Inverary, Argyll, N. B., ...	23 May, "	11 Sept. "	50	49	25	24	49	3,647	4	1	1-4th
103	Johnstone, Renfrew, N. B., ...	26 June, "	30 June, "	5	14	10	4	72 1/2	5,200	11	1	16th
121	Irvine, Ayr, N. B., ...	13 July, "	8 Oct. "	78	36	19	17	52	1,942	15	1	16th
164	Isleham, Cambridgeshire, ...	2 Sept. "	20 Sept. "	19	18	9	9	50	3,314	1	1	1-8th
69	Ives, St., Hunt, ...	3 May, "	11 May, "	9	6	4	2	66	11,265	1	1	1-8th
111	Kendal, Westmoreland, ...	2 July, "	4 Nov. "	136	168	68	100	40	2,050	1	1	1-8th
150	Kenton, Devon, ...	15 Aug. "	7 Oct. "	54	39	13	26	33	3,347	1	1	1-8th
154	Kenmore, Perth, N. B., ...	20 Aug. "	24 Aug. "	5	12	4	8	33	14,981	2	3	16th
147	Kidderminster, Worcestershire, ...	12 Aug. "	12 Sept. "	32	127	67	60	52 1/2	18,093	2	3	16th
90	Kilmarnock, Ayr, N. B., ...	9 June, "	10 Oct. "	119	399	205	194	58	2,869	1	1	1-8th
196	Kilmornaugh, Inverness, N. B., ...	10 Oct. "	10 Oct. "	1	2	2	..	100	1,445	1	1	1-8th
206	Kirknewton, Edinburgh, N. B., ...	27 Oct. "	11 Nov. "	16	10	5	5	50	3,692	1	1	1-8th
188	Kilpatrick, Old, N. B., Dumbarton, ...	30 Sept. "	18 Oct. "	19	53	25	28	48	3,772	1	1	1-8th
34	Kilwinning, Ayr, N. B., ...	2 March, "	14 March, "	13	22	6	16	27	4,806	1	1	1-8th
155	Kilbracken, Renfrew, N. B., ...	21 Aug. "	25 Aug. "	5	6	4	2	66	2,579	1	1	1-8th
209	Kinghorn, Fife, N. B., ...	2 Nov. "	3 Dec. "	32	33	15	18	43	2,624	5	1	1-8th
151	Kingsbridge, and Dodbrock, ...	16 Aug. "	17 Sept. "	33	136	30	106	22 1/2	15,156	1	1	1-8th
108	Kingswinford, Stafford, ...	29 June, "	25 Sept. "	89	266	83	183	31 1/2	5,034	1	1	1-8th
146	Kirkaldy, Fife, N. B., ...	11 Aug. "	17 Nov. "	68	96	48	48	50	1,240	10	1	1-8th
	Ditto, Dunnikier, and Sinclair town, N. B., ...	11 Aug. "	24 Nov. "	106	137	56	81	40	5,283	1	1	1-8th
"	Kirkintilloch, N. B., Dumbarton, ...	17 Jan. "	6 March, "	47	87	32	55	37	3,753	1	1	1-8th
114	Knareborough, York, ...	20 Dec. "	31 Dec. "	15	25	10	15	40	2,595	1	1	1-8th
89	Knottingley, York, ...	8 June, "	29 July, "	52	60	27	33	45				
115	Kircudbright, N. B., ...	6 July, "	19 July, "	14	3	3	..	100				

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5	Lancaster, including	17 Dec. 1831.	6 Sept. 1832.	45	35	20	15	57	12,613	2 1-10th	15-16th	
128	Lunatic Asylum, ...	13 Sept. 1832.	16 Oct. " "	34	246	94	152	40	3,491	2	7-8th	
40	Larbert, Sterling, N. B., ...	10 March, "	7 May, "	59	71	31	40	43	7,020	1-23rd	1-70th	
192	Latherton, Caithness, N. B., ...	5 Oct. "	5 Oct. "	"	3	1	2	33	123,393	1 7-16th	5-8th	
83	Leeds, York, ...	23 Nov. "	23 Nov. "	179	1,817	702	1,115	39				
19	Leith, N. B., ...	27 Jan. "	7 Dec. "	327	448	267	181	58				
"	" Ditto, Hillhousefield, ...	10 May, "	15 Nov. "	123	18	11	7	53				
"	" Ditto, Newhaven, ...	4 May, "	16 Oct. "	173	77	35	42	47				
190	" Ditto, Bastarig, ...	3 Oct. "	18 Oct. "	47	4	2	2	50	28,855	1 7-8th	13-16th	
"	" Ditto, Lock's Lodge, ...	27 Sept. "	10 Oct. "	14	5	4	1	80				
212	Levens, Fife, N. B., ...	26 Nov. "	26 Nov. "	1	18	14	4	75	2,566	5-8th	1-half	
75	" Lifg and Benvic, Forfar, N. B., ...	14 May, "	3 Dec. "	83	27	10	17	37	4,217	5-8th	1-4th	
126	Lincoln, ...	19 July, "	19 July, "	1	5	3	2	60	11,892	1-24th	1-40th	
114	Linwood, Renfrew, N. B., ...	5 July, "	20 July, "	47	17	9	8	52	169	10	5-16th	
145	Littleham, Devon, ...	10 Aug. "	15 Nov. "	98	57	19	38	33	2,841	2	5-8th	
76	Liverpool, Lancashire, ...	17 May, "	13 Sept. "	119	4,977	1,523	3,454	30	165,175	3 1-75th	29-32nd	
197	Liskeard, Cornwall, ...	12 Oct. "	2 Dec. "	52	63	26	37	40	3,519	1 7-8th	3-4th	
166	Lockerbie, N. B., ...	28 Sept. "	3 Oct. "	6	3	3	..	100	..	..	..	
96	Loversall, York, ...	14 June, "	21 June, "	8	3	2	1	66	131	2	1-3rd	
123	London and Greenholme, Ayr, N. B., ...	27 July, "	27 Aug. "	32	28	11	17	40	3,959	11-16th	1-4th	
59	Lynn, Norfolk, ...	10 April, "	27 Aug. "	140	134	49	85	37	13,370	1	3-8th	
165	Lymington, Devon, ...	3 Sept. "	28 Sept. "	26	8	2	6	25	1,020	8-10th	4-40th	
119	Larga, Ayr, N. B., ...	10 July, "	16 July, "	7	3	3	..	100	2,584	1-9th	1-9th	
114	Linton, North, ...	5 July, "	19 Sept. "	77	4	3	1	75	1,240	1-3rd	1-4th	
160	Madeley, Salop, ...	25 Aug. "	30 Sept. "	37	88	27	61	31	5,822	1-half	7-16th	
135	Maker and Rame, Cornwall, ...	30 July, "	15 Sept. "	48	133	41	92	32	3,533	3-4th	1-6th	
164	Marlow (Great), Bucks, ...	2 Sept. "	20 Sept. "	19	59	13	46	20	4,237	1 3-4th	5-16th	
35	Marston, Lanark, N. B., ...	5 March, "	28 March, "	24	61	24	37	40	7,539	13-16th	1-7th	
122	Maryport, Cumberland, ...	14 July, "	8 Sept. "	57	100	42	58	42	3,514	2 7-8th	1-7th	
107	Manchester, Lancashire, ...	29 June, "	5 Dec. "	160	1,323	674	649	55	142,026	5-16th	15-32nd	

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								Per cent.		Per cent.	Per cent.
125	Maidstone, Kent.	24 June, 1832.	10 Oct. 1832.	99	36	16	20	45	15,387	1-4th	1-10th
110	Merton, Oxon.	1 July, "	1 Aug. "	32	10	4	6	40	163	6 1-half	2 3-4th
162	Merthyr and Tydfil, Glamorgan.	31 Aug. "	27 Nov. "	89	608	160	448	26	22,083	2 3-4th	3-4th
48	Milton next Sittingbourne, Kent.	28 March, "	21 April, "	25	6	6	..	100	2,012	6-20th	6-20th
195	Milton (South), Devon.	9 Oct. "	13 Oct. "	5	13	5	8	40	415	3	1 1-4th
94	Minster, Sheerness, Kent.	13 June, "	6 Aug. "	55	86	38	48	45	8,414	1	7-16th
200	Moffatt, Dumfries, N. B.,	16 Oct. "	16 Oct. "	1	1	1	..	100	1,935	1-19th	1-19th
93	Mold, Flint.	12 June, "	30 Aug. "	80	26	14	12	55	8,086	6-16th	3-16th
60	Monkland (Old), Lanark, N. B.,	12 April, "	4 May, "	23	209	125	84	65	9,580	2 3-16th	1 5-16th
9	Morpeth, Northumberland.	31 Dec. 1831.	18 Oct. "	5	7	5	2	70	3,415	1-5th	1-7th
198	Morward, Bishop, Devon.	13 Oct. 1832.	17 Oct. "	5	1	1	..	100	1,935	1-19th	1-19th
13	Musselburgh, Edinburgh, N. B.,	18 Jan. "	20 March, "	63	447	202	245	45	7,886	5 3-4th	2 9-16th
198	Measles, Renfrew, N. B.,	13 Oct. "	22 Oct. "	10	11	5	6	48	2,814	3-8th	1-6th
193	Nairne, N. B.,	27 July, "	19 Aug. "	24	8	3	3	63	3,266	1-4th	5-32nd
175	Nantwich, Cheshire.	15 Sept. "	22 Sept. "	8	30	14	16	48	6,367	5-8th	5-16th
2	Newcastle-upon-Tyne, Northumb.	27 Nov. 1831.	12 Nov. "	351	3,487	801	2,686	38	42,760	8 1-4th	1 15-16th
142	Newcastle-under-Lyne, Stafford.,	7 Aug. 1832.	23 Oct. "	78	284	60	224	21	8,192	3 7-14th	3-4th
91	Newbold-on-Avon, Warwickshire,	10 June, "	2 Aug. "	54	38	13	25	33	1,063	3 1-half	1 1-8th
117	Newark-upon-Trent, Notts.	8 July, "	27 Aug. "	51	46	25	21	57	9,557	7-16th	3-16th
116	Newport, Monmouth.	7 July, "	19 July, "	13	20	13	7	65	7,062	5-16th	3-16th
193	Newtown, Montgomeryshire.	6 Oct. "	3 Dec. "	59	20	17	3	85	4,550	3-8th	3-8th
65	Nitshill, Renfrew, N. B.,	27 April, "	20 June, "	55	9	4	5	65	960	7-8th	5-8th
164	Ninian, St., Sterling, N. B.,	2 Sept. "	15 Nov. "	75	20	15	5	75	9,552	1-5th	5-32nd
200	Neath, Glamorganshire.	16 Oct. "	2 Nov. "	18	12	9	3	75	4,043	5-16th	3-16th
81	Northwich, Cheshire.	27 May, "	17 June, "	24	84	30	54	35	1,490	6 1-half	2
155	Norwich, Norfolk.	21 Aug. "	17 Oct. "	57	321	129	192	40	61,110	17-32nd	19-32nd
86	Nottingham.	6 June, "	7 Nov. "	136	796	296	500	37	50,680	1 9-16th	9-16th
177	Nuneaton, Warwick.	17 Sept. "	20 Nov. "	65	123	56	67	45	7,799	1 1-half	3-4th

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								Percent.		Percent.	Percent.
150	Oldbury, Salop.	15 Aug. 1832.	8 Oct. 1832.	55	198	37	161	17½	4,482	4 3-8th	13-16th
169	Oldland, Gloucestershire, . . .	11 Sept. "	25 Sept. "	15	2	..	2	..	4,297	1-21st	..
168	Oldney, Bucks, ...	6 Sept. "	9 Nov. "	65	45	22	23	50	2,339	2	15-16th
193	Orwell, Kenos, N. B., ...	6 Oct. "	8 Nov. "	34	31	15	16	50	3,005	1	1-half
199	Ossetum, Gawthorpe, York, . .	15 Oct. "	23 Oct. "	9	11	5	6	17½	4,482	4 3-8th	13-16th
199	Oxford, ...	26 June, "	28 Nov. "	156	173	81	92	47	20,434	13-16th	3-8th
"	Ditto, St. Giles, ...	26 July, "	16 Sept. "	53	8	5	3	62½	2,491	1-3rd	1-5th
84	Owston, Lincoln, ...	4 June, "	15 July, "	42	89	17	72	20	1,969	4 1-half	7-8th
143	Padstow, Cornwall, ...	8 Aug. "	13 Sept. "	37	114	23	91	20	1,822	6 1-3rd	1 1-4th
25	Paisley, Renfrew, N. B., . . .	15 Feb. "	8 Nov. "	267	761	444	317	57½	57,466	1 5-16th	13-16th
"	Ditto, Neilston, ...	1 Oct. "	1 Oct. "	1	6	5	1	80	4,191	11	2
126	Paul, Cornwall, ...	27 July, "	7 Dec. "	134	466	81	385	17½	1,784	15 1-4th	3 1-half
186	Paulton, Somerset, ...	28 Sept. "	6 Nov. "	40	273	66	207	24	1,205	3 1-half	1 1-half
151	Pendleton, Lancashire, . . .	16 Aug. "	18 Sept. "	34	43	17	26	40	2,536	1-3rd	1-4th
129	Pershore, Worcester, ...	23 July, "	6 Aug. "	15	8	6	2	75	2,933	1-29th	..
183	Penryn, Cornwall, ...	24 Sept. "	24 Sept. "	1	1	..	1	..	20,016	5-8th	5-16th
39	Perth, N. B., ...	10 March, "	4 July, "	117	114	66	48	57½	8,621	2 3-16th	3-4th
177	Penzance, Cornwall, ...	17 Sept. "	20 Nov. "	65	186	64	122	32½	422	5	1 1-half
104	Piddington, Oxon, ...	25 June, "	5 Aug. "	42	20	6	14	30	31,080	5 13-16th	2 1-4th
96	Plymouth, Devon, ...	15 June, "	15 June, "	102	1,805	702	1,103	39	3,088	2 1-half	16-16th
136	Plymouth, Devon, ...	1 Aug. "	15 Oct. "	76	79	29	50	35	805	6	2 3-8th
159	Plympton Maurice, Devon, . .	25 Aug. "	13 Sept. "	20	49	19	30	38	2,153	3 1-half	1 3-8th
134	Plympton, St. Mary, Devon, . .	28 July, "	6 Oct. "	70	74	30	44	45	33,112	1-32nd	1-64th
153	Preston, Lancashire, ...	18 Aug. "	26 Oct. "	70	9	6	3	66	2,322	6 3-4th	1 1-half
19	Preston Pans, Haddington, N. B.,	25 Jan. "	10 May, "	107	144	28	116	20½	2,781	2 1-4th	1 1-5th
"	Preston, West, ditto, ...	6 March, "	17 March, "	12	10	6	4	60	5,192	3 3-4th	1 6-16th
44	Portobello, Edinburgh, N. B., .	20 March, "	20 May, "	72	61	33	28	55			
58	Port Glasgow, Renfrew, N. B., .	9 April, "	20 Oct. "	143	192	69	123	37			

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								Per cent.		Per cent.		
132	Portsmouth, Hants.	26 July, 1832.	22 Decem. 1832.	150	192	86	106	45	46,282	7-16th	3-16th	3-16th
138	Pudsey, York.	13 Oct. "	25 Dec. "	74	25	9	16	37½	6,229	3-8th	1-7th	1-7th
161	Ramsey, Hunts.	13 April, "	15 May, "	34	54	20	34	37	3,006	1 3-4th	2-3rd	2-3rd
165	Rathern, Bamf. N. B.,	3 Sept. "	22 Oct. "	50	134	15	119	11½	6,484	2 1-16th	3-16th	3-16th
98	Rawdon, York.	17 June, "	6 July, "	20	13	2	11	16	1,759	3-4th	1-9th	1-9th
151	Reading, Berks.	16 Aug. "	9 Oct. "	8	13	8	4	66	15,695	1-13th	1-19th	1-19th
182	Rehbold, Bedford.	22 Sept. "	7 Nov. "	47	11	4	7	41	340	3	1 1-4th	1 1-4th
125	Retford, East, Notts.	18 July, "	9 Sept. "	54	51	12	39	22	2,491	2	1-half	1-half
56	Rickmansworth, Berks.	6 April, "	23 April, "	18	16	3	13	20	4,574	1-3rd	1-15th	1-15th
110	Rochford, Essex.	1 July, "	8 July, "	8	10	6	4	60	1,256	3-4th	1-half	1-half
47	Rothay, Isle of Bute, N. B.,	26 March, "	3 May, "	39	21	14	7	66	4,817	7-16th	3-4th	3-4th
109	Rudham, East, Norfolk,	30 June, "	24 July, "	25	51	5	46	10	950	5 1-half	1-half	1-half
118	Runcorn, Cheshire.	9 July, "	26 Oct. "	110	36	18	18	50	5,035	3-4th	3-8th	3-8th
52	Rutherglen, Lanark, N. B.,	1 April, "	19 Oct. "	99	127	65	62	52	5,503	2 1-3rd	1 1-5th	1 1-5th
63	Rynd, Perth, N. B.,	15 April, "	16 April, "	1	2	1	1	50	400	1-half	1-4th	1-4th
148	Rotherham, York.	13 Aug. "	20 Nov. "	100	159	34	125	20½	3,548	4 1-half	15-16th	15-16th
119	Rochester, Kent.	10 July, "	17 July, "	8	10	3	7	30	8,075	1-8th	1-17th	1-17th
121	Salford, Lancashire.	13 July, "	7 Nov. "	118	701	216	485	31½	40,786	1 3-4th	1-half	1-half
139	* Saltaash, Cornwall,	4 Aug. "	12 Nov. "	6	63	10	53	15	3,092	2	1-3rd	1-3rd
32	Saltonhead, Monston, N. B.,	29 Feb. "	3 March, "	4	2	..	2	..	786	1-4th	..	..
144	Sedgley, Stafford.	9 Aug. "	16 Oct. "	69	1468	231	1232	15½	20,577	7 1-8th	1 1-16th	1 1-16th
57	Salby, York.	8 April, "	21 July, "	105	91	32	59	35	4,600	2	3-4th	3-4th
5	* Shields, South Northumberland,	22 Dec., 1831.	8 Oct. "	148	493	147	346	30	19,756	2 1-half	3-4th	3-4th
3	Shields, North, and Tynemouth,	"	"	103	339	98	241	29	16,926	2	9-16th	9-16th
119	Sheffield, York.	10 Dec. 1832.	3 Nov. "	117	1347	402	945	30	59,011	2 1-4th	11-16th	11-16th
116	Shilton and Anstey, Warwick,	17 July, "	7 Aug. "	32	23	9	14	40	396	6	2 1-4th	2 1-4th
139	Shrewsbury, Salop.	4 Aug. "	31 Oct. "	89	219	75	144	35	21,277	1 1-32nd	11-16th	11-16th

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178	Slanes, Collieston, Aberdeen, N. B.	18 Sept. 1832.	16 Oct. 1832.	28	54	9	45	Per cent. 16½	1,134	6	3-4th	1-6th
84	Snaith and Eastington, York.	4 June, "	4 June, "	1	6	4	2	66	885	2-3rd	1-half	1-4th
154	Steadford, New Lincoln.	20 Aug. "	9 Sept. "	21	12	6	6	50	2,450	1-half	1-4th	1-2-3rd
68	Stadhampton, Oxon.	1 June, "	6 Oct. "	7	10	5	5	50	313	3 1-3rd	1-4th	1-2-3rd
168	Stanley, near Wakefield, York.	6 Sept. "	14 Sept. "	9	3	3	2	33	4,620	1-16th	1-46th	1-25th
168	Stanley cum Westhorpe, York.	6 Sept. "	6 Oct. "	31	6	2	4	33	5,047	1-8th	1-6th	1-9th
183	Stapleton near Bristol, Gloucester.	23 Sept. "	9 Oct. "	17	5	3	2	60	2,715	1-6th	1-18th	1-18th
31	* Stanton, Haddington, N. B.,	28 Feb. "	28 Feb. "	1	5	3	2	60	636	3-4th	1-half	1-18th
197	Stevenson, Ayr, N. B.,	12 Oct. "	12 Oct. "	1	2	2	..	100	3,544	1-18th	1-18th	3-8th
199	Stewarton, Ayr, N. B.,	15 Oct. "	7 Nov. "	24	8	8	..	100	2,234	3-8th	6-8th	7-16th
88	Stirling, &c., N. B.,	7 June, "	27 July, "	51	54	35	19	65	8,556	1-4th	..	..
205	Sow, Warwick.	23 Oct. "	7 Nov. "	16	3	..	3	..	7,991	3 13-16th	1-5-8th	1-32nd
32	* Stockton-upon-Tees, Durham,	5 Feb. "	22 Sept. "	79	304	126	178	41½	66,610	1-10th	1-8th	1-8th
100	Stockport, Cheshire.	9 June, "	13 Oct. "	117	66	29	37	45	37,220	3-8th	1-half	2-3-8th
161	Stoke-upon-Trent, Stafford,	28 Aug. "	20 Dec. "	125	165	46	119	26	461	9 1-half	3	1-3-8th
150	Stoke, Mandeville, Bucks.	15 Aug. "	26 Aug. "	43	40	10	30	25	9,571	1-16th	1-5th	1-5th
111	Stonehouse, East Devon.	9 July, "	20 Sept. "	71	285	133	152	47	6,148	2-3rd	1-4th	1-4th
120	Stourport, Worcester.	13 July, "	6 Nov. "	118	63	13	50	21	3,069	3-2-16th	1-3-16th	1-18th
210	Stratford-upon-Avon.	8 Nov. "	4 Dec. "	27	20	7	13	35	17,060	1-18th	1-18th	1-18th
1	Sunderland, Durham.	26 Oct. 1831.	20 April, "	177	554	215	339	38	3,510	3 1-4th	1-4th	1-6th
179	Sutton, Long.	19 Sept. 1832.	19 Sept. "	1	2	2	..	100	13,256	1-4th	1-4th	1-4th
144	Swansea, Glamorgan.	9 Aug. "	22 Sept. "	45	430	152	278	35	1,414	6 1-4th	2 1-8th	3-4th
78	Swanscombe, Kent.	24 May, "	5 June, "	16	116	30	86	27	957	2 7-8th	1-6th	1-18th
69	Swinefleet, York.	3 May, "	15 June, "	44	26	7	19	26	3,605	3 1-half	3-16th	1-6th
114	Swinton, Notts.	6 July, "	19 Sept. "	77	6	2	4	33	3,078	3 1-half	3-16th	1-6th
160	Tain, Ross, N. B.,	27 Aug. "	25 Oct. "	60	107	55	53	52	1,809	3-16th	1-6th	1-6th
141	Tarbutt, Ross, N. B.,	6 Aug. "	6 Aug. "	1	4	3	1	76	..	..	..	..

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								Per cent.		Per cent.	Per cent.
154	Tardbiggs, Warwick.	20 Aug. 1832.	24 Nov. 1832.	97	80	38	42	48	4,145	17-8th	15-16th
156	Tavistock, Devon.	24 Aug.	28 Aug.	5	5	4	4	1	5,602	1-4th	1-14th
191	Taunton, Somerset.	4 Oct.	26 Oct.	23	13	3	10	24	11,139	1-8th	1-37th
210	Tenbury, Worcester.	6 Nov.	6 Nov.	1	4	2	2	50	1,093	4-11th	2-11th
207	Tinwald, Dumfries, N. B.,	31 Oct.	7 Nov.	8	4	4	..	100	1,320	1-3rd	1-3rd
103	Tipton, Staffordshire.	24 June,	7 Oct.	106	1,018	281	737	27½	14,951	63-4th	17-8th
129	Tewksbury, Gloucestershire,	23 July,	5 Oct.	75	158	76	82	48	5,780	23-4th	15-16th
150	Tiverton near Bath, Somerset,	5 Aug.	21 Oct.	68	49	23	26	47½	1,500	3-5-8th	1-1-half
133	Thurso, Caithness, N. B.,	27 July,	20 Sept.	56	63	26	37	42½	4,679	15-16th	9-16th
139	Totness, Devon.	4 Aug.	24 Sept.	52	64	17	47	27	3,442	17-8th	1-half
132	Tottenham, Middlesex.	26 July,	5 Oct.	72	11	7	4	67½	5,812	3-16th	1-8th
173	Tornham, Devon.	12 Sept.	5 Nov.	55	39	21	18	52	3,532	11-3rd	1-half
12	Tranent, Haddington, N. B.,	16 Jan.	28 Feb.	44	282	78	204	27½	3,628	73-4th	21-6th
154	Trentham, Stafford.	15 Aug.	25 Oct.	3	5	1	4	20	2,344	3-16th	1-24th
165	Trowell, Notts.	3 Sept.	3 Sept.	1	8	2	6	25	464	17-8th	3-8th
181	Troquar, Kircudbright, N. B.,	21 Sept.	26 Nov.	67	235	125	110	53	4,665	5	25-8th
159	Tullianan, Perth, N. B.,	25 Aug.	14 Sept.	21	4	3	1	75	3,550	1-9th	1-12th
196	Tweedmouth, Durham.	10 Oct.	30 Nov.	52	138	72	66	52	4,678	3	11-half
127	Uxbridge, Middlesex.	20 July,	22 July,	3	16	10	6	62½	3,043	1-half	1-3rd
130	Upton-on-Severn, Gloucestershire,	24 July,	29 Aug.	37	56	34	22	62	2,343	2-3rd	11-half
152	Wadebridge, Cornwall.	17 Aug.	10 Oct.	55	13	6	7	48	2,785	7-16th	2-9th
103	Wakefield, York.	24 June,	10 Oct.	109	156	62	94	40	12,232	11-4th	1-half
135	Waltham Abbey, Herts.	30 July,	6 Aug.	8	9	5	4	52	4,104	1-5th	1-8th
152	Walsal, Staffordshire.	17 Aug.	29 Sept.	44	378	77	301	21	15,066	21-half	5-8th
99	Warrington, Lancashire.	24 June,	10 Sept.	79	420	168	252	40	16,018	2-5-8th	11-20th
81	Watlington, Oxon.	25 May,	25 May,	1	3	2	1	66	1,833	1-6th	1-9th
116	Ware, Herts.	7 July,	16 Aug.	41	31	13	18	40	4,214	3-4th	1-3rd
115	Watford, Herts.	6 July,	16 Aug.	42	75	30	45	40	5,293	15-8th	9-16th
184	Wantage, Berks.	26 Sept.	10 Oct.	15	30	18	12	60	2,507	11-6th	11-16th
"	Ditto Grove, Berks.	1 Oct.	10 Oct.	10	29	9	20	30	520	3-4th	13-4th

No. on Map.	NAMES.	Date of first Case.	Date of last Case.	No. of Days Duration.	Total Cases.	Total Deaths.	Total Recoveries.	Proportion of Deaths to Cases.	Population.	Proportion of Population attacked.	Per cent. of Deaths in Population.
144	Wednesbury, Stafford,	9 Aug. 1832.	9 Oct. 1832.	62	175	78	97	45	8,437	2 1-12th	15-16th
193	Wells, Somerset,	6 Oct. "	11 Oct. "	6	2	1	1	50	6,649	1-33rd	1-66th
175	Wellington, Salop,	15 Sept. "	1 Oct. "	17	14	4	10	27	9,671	1-7th	1-24th
171	Wemyss, Fife, N. B.,	9 Sept. "	25 Sept. "	17	32	17	15	52	1,611	2	1 1-16th
174	Whitby, York,	13 Sept. "	12 Nov. "	61	51	27	24	55	8,697	19-32nd	5-16th
82	Whitney, Camb.,	29 May, "	10 Sept. "	104	461	97	364	22	6,019	7-8th	1 5-8th
110	Whitehaven, Cumb.,	1 July, "	11 Nov. "	134	835	244	591	29	18,000	4 5-8th	1 1-3rd
176	Windsor, New, Berks,	16 Sept. "	22 Sept. "	7	29	15	14	50	5,191	5-8th	5-16th
138	Willenhall, Stafford,	2 Aug. "	2 Oct. "	61	42	8	34	19	3,965	1 1-20th	1 5th
142	Wick, Caithness, N. B.,	7 Aug. "	3 Nov. "	89	411	69	342	17	9,850	4 1-8th	5-8th
104	Wigan, Lancashire,	25 June, "	2 Aug. "	39	85	30	55	35	20,774	7-16th	5-32nd
151	Willoughby, Warwick,	16 Aug. "	16 Aug. "	1	2	1	1	50	431	1-half	1-4th
126	Wisebeach, Camb.,	19 July, "	17 Sept. "	61	103	41	62	40	7,250	1 7-16th	19-32nd
92	Wistow, York,	11 June, "	7 July, "	27	13	5	8	40	638	2	7-8th
160	Woodbury, Devon,	27 Aug. "	20 Oct. "	55	7	4	3	52	1,494	1-half	1-4th
185	Woodbridge, Suffolk,	27 Sept. "	22 Sept. "	1	1	1	..	100	4,769	1-48th	1-48th
143	Woolverhampton, Stafford,	8 Aug. "	22 Sept. "	65	566	193	373	31	24,732	2 5-16th	13-16th
123	Worcester,	14 July, "	11 Oct. "	105	292	79	214	27	18,610	1 9-16th	7-16th
95	Woolstanton, Salop,	13 June, "	21 Oct. "	9	13	2	11	15	1,083	1 1-5th	1-5th
122	Worlington, Cumberland,	15 July, "	29 Sept. "	77	333	119	214	27	6,439	5 1-6th	1 7-8th
170	Worsley, Lancas.,	9 Sept. "	28 Oct. "	49	95	16	79	16	7,191	16-16th	3-16th
74	Wrexham, Denbigh,	12 May, "	10 July, "	60	12	7	5	51	3,441	5-16th	3-16th
46	Yarmouth, Norfolk,	22 March, "	23 March, "	2	2	2	..	100	21,115	1-105th	1-105th
85	York,	3 June, "	8 Oct. "	128	504	185	265	40	25,359	1 3-4th	11-16th
	TOTALS,	..	..	..	71,508	26,101	45,407	..	3,798,761	..	..

NOTE.—In those places marked * the exact number of days' duration of the disease is made up from its commencement to its ceasing at different periods.

LONDON AND ITS VICINITY.

Date of first Case.	Date of last Case.	Total Cases.	Total Deaths.	Total Recoveries.	Proportion of Deaths to Cases.	Population.	Proportion of Population attacked.	Proportion of Deaths in Population.
14 Feb. 1832.	18 Dec. 1832.	11,020	5,275	5,745	Per cent. 47 5-8th	1,424,896	Per cent. 25-32	Per cent. 23-64
The Number of Days' Duration is made up as under, viz.— Cases. Deaths. From 14th Feb. to 15th May, 1832, 91 days, total 1848 994 " 15th June, to 31st Oct. " 129 " 9142 4266 In November and December, " 10 " 30 15 230 11,020 5,275								

GROSS TOTALS.

	Total Cases.	Total Deaths.	Total Recoveries.	Proportion of Deaths to Cases.	Population.	Proportion of Population attacked.	Proportion of Deaths in Population.
London and its Vicinity, ...	11,020	5,275	5,745	Per cent. 47 1-half	1,424,896	Per cent. ..	Per cent. ..
Country, ...	71,508	26,101	45,407	36 1-half	3,798,761	..	..
Ireland to 1st March, 1833, . .	82,528	31,376	51,152	38	5,223,657	1 19-32	19-32
Total in United Kingdom, . . .	54,552	21,171	33,381	38 7-8th	..	..	..
	137,080	52,547	84,533	38 1-4th	..	..	..

ART. VI.—*Observations on Plastic Bronchitis, or Bronchial Polypi.* By ROBERT CANE, M.D., M. R. C. S. L., Kilkenny.

THE two annexed cases of the peculiar bronchial inflammation, in which the sputa occur, designated by authors “plastic, membranous, bronchial polypi, &c.,” may prove interesting to those of the Profession who may not have witnessed that rare affection.

The cases, one occurring in my practice, and the other in that of Dr. Corrigan, are instructive, inasmuch as they appear to modify some pre-conceived opinions of the nature and complications of that disease, but the important feature is the decisive benefit resulting from mercurial treatment. I send an accurate drawing of the sputa ejected in my case; the drawing is made from the preparations in my possession, and is correct, both as to size and character.

Dr. Corrigan's case I am most happy to publish with mine, because it tends to strengthen the views I have adopted, and still further proves the value of mercury in the treatment of a dangerous malady; but one which, if we are to judge from the present cases, we can speedily control by a remedy which has singularly suggested itself to two medical men, without any communication with each other upon the subject; in each case attended with the same good result, and leading the mind of each to draw nearly the same conclusions.

May 9th, 1838. I was called to see Mr. L——y, of a full, but marked lymphatic habit; presenting the well-known characteristic of that temperament, countenance tallowy white, lips watery red, eyes grey, hair brown, no traces of a cutaneous circulation visible to the eye, and seldom, even under exercise or excitement, presenting the rush of red blood; rather under the middle size, stout and muscularly made, with tendency to obesity; lives freely, is strong and active, and enjoys general good

health. He was out at a country party two days since, and was exposed to the night air while heated, returning to his own home. Complains of headach and much thirst; pulse ninety; respiration twenty; tongue brown and moist; skin hot and dry; urine high coloured; bowels confined for two days.

℞ Calomel. gr. iii.

Pil. Colec. Comp., gr. viii.

M. ft. pil. ii. S.S. et. sumat 3 i. Misturæ Salinæ, 2ndis horis.

May 10th, 9 A. M.—Bowels well freed; has had a restless night; tongue as yesterday; pulse one hundred and ten; respiration thirty; has had some cough which set in during the night; complains of a dull pain in the right side, which does not affect him when making a full inspiration, but he feels it much when he coughs. Coughed while I was with him; the sputa are frothy, tenacious, and slightly rusty. The stethoscope indicates inflammation at the inferior part of the right lung, over a space of about four inches square, extending from the mamma downwards and backwards. Healthy respiration over the rest of the chest.

Venesectio ad deliquium.

He fainted upon the abstraction of about fourteen ounces of blood.

1 o'clock P. M. Pain continues, cough and expectoration increased; sputa more decidedly rusty; pulse 140; small and feeble; voice and manner strongly indicative of tendency to syncope.

Cucurbitula cruenta afficiantur parti affecto et educantur sanguinis 3 vi.

℞ Tart. Ant. gr. i.

Aquæ 3 viii.

M. Capt. 3 i. 2ndis horis.

9 P. M. Side rather easier; in other respects same as at noon. Pergat.

May 11th, 9 A. M. Has spent a restless night; cough frequent; has thrown up a considerable quantity of pneumonic ex-

pectoration ; pulse 120. Some pain in side still continues ; other symptoms as yesterday. *Haustus salinus aperiens*, as his bowels have not been freed since the 9th.

1 P. M. Bowels moved ; pain in side continues ; stethoscope ascertains that the portion of lung first attacked is undergoing hepatization, and the inflammation extending upwards.

Applicentur hirudines xx. et cucurbitula sine ferro.

9 P. M. Cough constant and teasing ; pain less ; pulse feeble ; and 140 ; respiration thirty-six ; has had but little sleep for the last two nights.

℞ Tart. Ant. et Potassæ, grani quartam partem.

Ext. Opii Aquosi gr. iss.

Pil. Hydrarg. gr. ii. M. ft. pil. ii. S. S.

May 12th, 8 A. M. Has slept some ; feels tranquil ; pain nearly gone ; but auscultation marks extension of the disease ; crepitous rale heard over a greater extent ; and dull sound on percussion over part first attacked ; pulse 110 ; respiration 30.

℞ Tart. Ant. et Potassæ gr. iv.

Aquæ ℥ vii.

Syrup. ℥ i.

M. Capt. ℥ ½ 4tam partem horæ.

1 P. M. The first dose of the antimony produced sickness, but the stomach now tolerates it well ; symptoms as in the morning.

Reptr. Mist. Tart. Ant. c. add. Tart. Ant. gr. ii.

9 P. M. Symptoms as at noon : tartar emetic is borne well.

Reptr. Mist. c. add. Tart. Ant. gr. vi.

May 13th, 9 A. M. Complains of some pain in his bowels ; in other respects same as yesterday.

Reptr. Haustus Aperiens.

1 P. M. Pain in the side has returned ; pulse 110, and fuller, but only relatively so ; sputa well marked ; cough constant ; the physical signs indicating extension of the disease.

Ft. Venesection ad 3 iv. et pergat c. Mist. Ant.

8 P. M. Fainted after the abstraction of 2 oz. of blood; is easier. Pergat.

May 14th, 8 A. M. Same as last night, save that a slight crepitating rale is heard in portion of lung first attacked.

Repr. Mist. Tart. Ant.

2 P. M. Same as in the morning, except that rale sonore is heard over several points of right lung.

10 P. M. Some return of pain, but nearer the mamma where disease last spread. Cupped; but scarcely any blood was procured, yet the cupping gave relief. The sputa of the last twenty-four hours have been putting on a remarkable and unusual character; the rusty colour has been gradually disappearing, and portions of a firm and membranous substance have been spit up in the centre of a glairy and ordinary bronchitic expectoration.

May 15th. Has spit up several sputa during the night, which are decidedly the "*plastic sputa.*" They are of a yellowy white, or cartilaginous colour, with a kind of red web-work on the outside, firm and consistent, arborescent, and evidently casts of the bronchial tubes. He expresses himself apprehensive that they will choke him, for he feels great difficulty at times in getting them up, and they come with the force of a pellet out of a pop-gun. Pulse 100; respiration, when at rest, 26. Auscultation marks the gradual return of respiration to the portions of lung engaged in the pneumonia; but the rale sonore and dove-coo, are heard over the chest, blended with an occasional sound which I never heard in any other case, which conveys the distinct sound of a body moving with inspiration and expiration, a sort of rubbing sound, but not the frottement.

Pergat Mist. Ant.

2 P. M. The quantity of plastic sputa is very great, and some pieces have been thrown up of an alarming size, being several inches in length, consisting of seven or eight branches, the

root or large branch is as thick as a woman's little finger. It is evident the antimony is not controlling it. To take one of the following pills every three hours.

℞ Tart. Ant. et Potassæ gr. iii.

Calomelanos gr. xii.

Pulv. Doveri gr. x.

Confect. Aromat. gr. v. M. ft. pil. sex.

10 P. M. The symptoms continue the same, with the addition of some pain in the side which arrests a full inspiration, and as the healthy sounds are returning, appears to be pleuritic.

Habt. Emp. Canth. lateri appl.

May 16th. Pain better; other symptoms as yesterday.

Reptr. Pilulæ sex.

1 P. M. Pulse 90; respiration 24. The plastic sputa still continue, but less in size and quantity; cough less troublesome. Ordered gum mixture, as he suffers from strangury after the blister.

10 P. M. Plastic expectoration diminishing. Pergat.

May 17th. Improving: to have an aperient draught, and to continue his pills.

1 P. M. Some return of pain; cupped; no blood obtained: six leeches applied, which drew but little blood. Mercury to be continued.

10 P. M. His gums are looking red and spongy, and he complains of bad taste and tenderness. Sputa thick, but not moulded; cough much less frequent. Pulse 80; respiration natural. To repeat his pills; and as some uneasiness of side still continues, to have a blister.

May 18th. Is doing well: he was speedily convalescent.

The important points in this case, which appear to me to merit attention, are, first, the fact of such a disease occurring upon the subsidence of a pneumonia, the one almost running into the other; secondly, that it occurred during an attack of acute inflammation, in opposition to the opinion of Laennec, Stokes,

Copland, &c.; who describe it as occurring in chronic disease, and rarely occurring at all ; thirdly, that those writers describe it as occurring in tubercular disease, of which there is neither symptom nor hereditary tendency in my patient ; fourthly, that it occurred in one of those remarkable lymphatic habits which would appear to bear out the curious theories of Bretonneau and Graves, regarding the re-productive powers of white blood animals ; fifthly, that while the disease progresses, in spite of the antimonial treatment, it yielded at once to the influence of mercury, to the adoption of which I was led, reasoning from analogy on its effects in other diseases, where we wish to alter morbid action, arrest morbid secretions, or remove morbid deposits ; and lastly, that the disease is of such rare occurrence, that isolated cases only have appeared in the practice of such men as Laennec, Stokes, Marsh, Williams, and Cheyne. Laennec, as admitted by Forbes, has confounded bronchial concretions with ~~those casts of the air tubes resulting from coagula deposited there-~~ in, and bearing not the slightest resemblance to the true plastic sputa, as exhibited in the annexed engravings, which display the firm and albuminous appearance of the sputa, their arborescent shape, as casts of the bronchial tubes, and their remarkable membranous character, being divisible into layers of a concentric disposition, arranged not unlike the barks of a tree, layer within layer ; and it would seem as if the central layer was the first deposited, and then the next, and so on counting out to the outer coat. They are exceedingly firm, requiring considerable force to tear them, and then separating, so as to display somewhat of a fibrous character, with intervening cells, the fibres running parallel to the length. When first thrown up, they were of a deeper shade of their present light buff colour, and in several places presented an arrangement of red lines on the surface, crossing each other at irregular angles, and forming a net work, which at first sight, looked like blood vessels, but which closer inspection led me to assume, were a kind of moulding in red serum, of the minute vessels of each bronchial tube, perhaps enlarged

and distended with the peculiar inflammation which produced the sputa. This net-work disappeared on maceration. The cellular arrangement between the layer was caused, no doubt, by the bubbles of air forcing through the sputa, when first ejected, and of soft consistence. The plate represents the several specimens I have preserved; *a. b.* and *c.* shew the arborescent arrangement, as true casts or plugs of portions of bronchial tube; the size on the plate is accurately that of the preparation, as now seen, after eighteen months' immersion in spirits of wine, but somewhat shrunken of their original size, *d.* is a portion; the external layer of membrane, separated and reflected, so as to shew the formation of the sputa; *e.* is a portion, divided longitudinally, to display the appearance of the cells as lying between the layers; *f.* is a transverse section for the same purpose. The annexed case was sent to me by my friend, Dr. Corrigan; it tends to more fully illustrate this most curious and interesting disease, and still further displays the value of mercury:

" Dublin, 4 Merrion-square, Dec. 13, 1839.

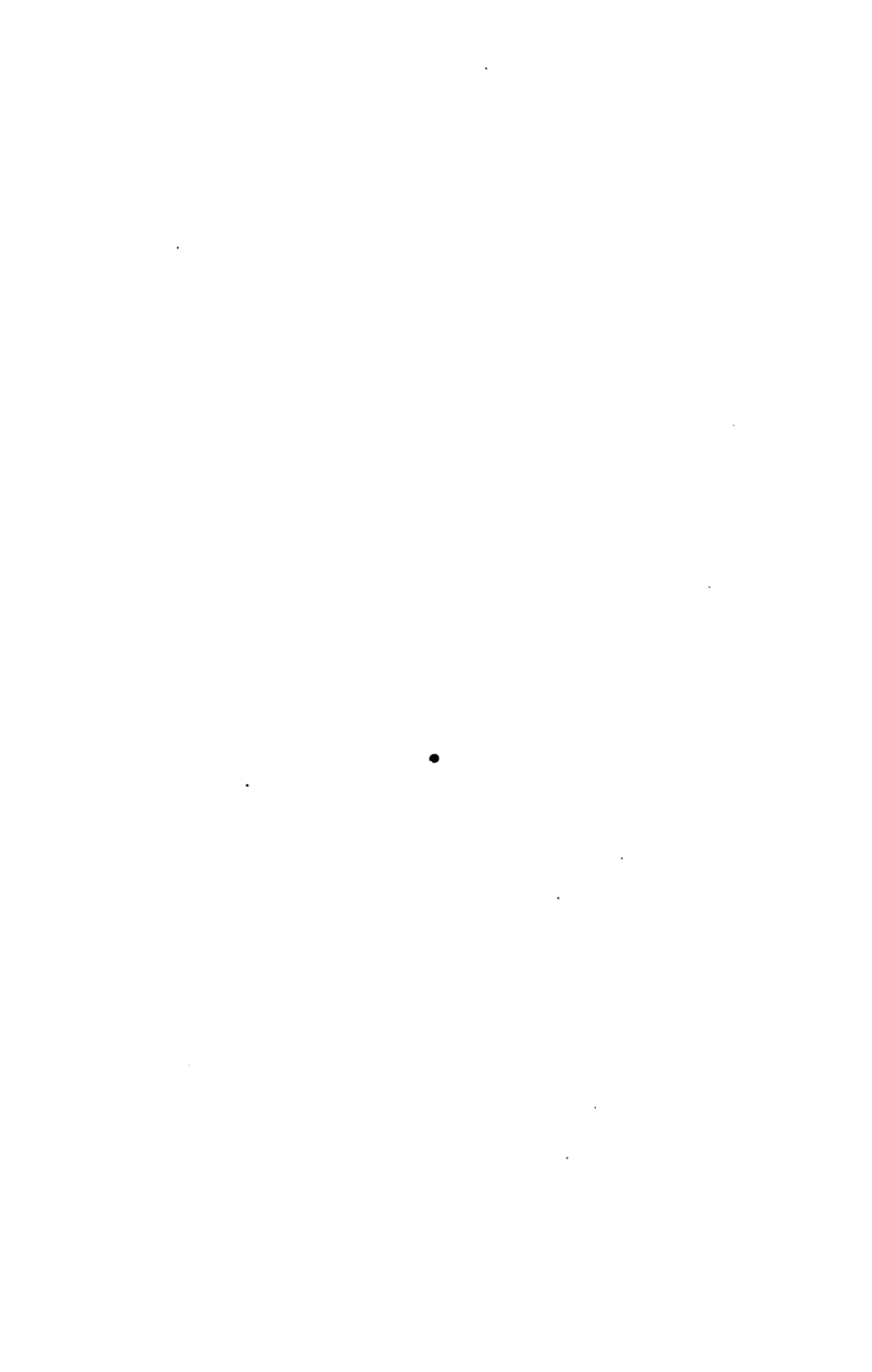
" MY DEAR DOCTOR,

" Having learned from our mutual friend, Mr. Scott, that you have had some favourable opportunities of observing that rare disease, 'bronchial polypi,' or 'plastic bronchitis,' and that you are about to publish your observations, I shall feel obliged if you will accept from me, as a contribution to your paper, the notes of the following case:

" On the 14th August, 1839, Mr. A——ng, a gentleman of about forty years of age, called on me. As he entered my study, his aspect seemed that of a man in the last stage of valvular heart disease: his countenance was sunken and anxious, his lips were bluish, and his respiration so laboured as to be almost painful to look at; each inspiration was accompanied with a wheezing, so loud that, at first, I thought it was produced in the larynx, but his voice was unaltered. He told me that, notwithstanding his apparent distress of breathing, he was at that

DR CANE'S CASES OF BRONCHIAL POLYPI.





moment comparatively easy ; that at times the distress of breathing became most severe. On several occasions within the last three weeks, he had attacks of suffocation, coming on in the course of the night, lasting so long as half an hour, and as he described them, threatening almost death. Sometimes, for hours, he has been obliged to sit up, with the window open. These fits terminated in expectoration. He has no palpitations ; his appetite is good, and his bowels are regular, he attributes his illness to cold, as its commencing cause, caught about twelve months since, when, after exposure on a coach, he got cough ; then in the spring, influenza ; and within the last three weeks the suffocative attacks. On examining the chest, I found the sounds of the heart quite natural, and the sound on percussion over the chest good ; but on applying the stethoscope under the right clavicle, my attention was at once suddenly arrested by the great irregularity of the respiratory murmur. At one moment the respiratory murmur was very loud, and the next instant it was nearly inaudible. The clear wheeze, above noticed, (*râle sibilant*) was immoderately loud and piercing under the right clavicle, but on tracing upwards with the stethoscope, it became less loud as the stethoscope approached the larynx. These singular varieties in the respiration made me suspect the existence of aneurism or tumours, &c. pressing on the larger bronchia, but I sought in vain for any sign of their existence. I then desired him to cough very freely. He coughed, hard and with a bronchitic ringing, for some moments, and after some efforts expectorated four or five bronchial polypi or moulds of lymph of the bronchial tubes. Of these plastic concretions, one was as thick as a small-sized goose quill and about an inch and half long ; several were much smaller in diameter, but longer, and all were white, opake, and remarkably tough. The expulsion of these plastic secretions was immediately followed by a very remarkable change in the state of respiration. The respiratory murmur instantly became suddenly loud, and equal in both lungs, and the wheez-

ing ceased, nor could he again, by coughing or by any effort, reproduce it. The nature of the case was now clear : some of the bronchial tubes had taken on this plastic secretion, and as this formed each successive night, it blocked up the bronchial tubes, until, at last, the obstruction in these tubes rose to such a height as to bring on impending suffocation. From this he only got relief by fits of coughing, which dislodged the secretion, and then there was an interval of ease until the secretion began again to be formed. This diseased state of secretion was not likely to be alleviated by a course of anti-spasmodic and stimulant remedies which he had been using, under a supposition that his disease was asthma. I at once determined to put Mr. A. under the influence of mercury, in combination with alkalies. I ordered him 10 gr. of hyd. c. magnesia three times a-day, with full doses of aqua kal. caustici, and desired him to inhale, twice a day, the steam of water in which conium leaves were infused. This treatment was commenced on the 14th inst., and there was little alteration until the 19th, when the gums became sore, and at the very same time the plastic secretion ceased; the expectoration became quite diffuent, and the embarrassment of breathing disappeared; he had to rise no more from bed during the night; he slept well, and coughed none until morning, when he expectorated a few fluid sputa, as had been his habit for years, and he suffered no more uneasiness during the day. I visited him occasionally until the 26th inst., when his health was in every respect perfectly established.

“ This case impresses one strongly with the importance and necessity of attending even to a minute examination of the sputa in thoracic disease. Had this examination been overlooked in this case, the nature of the disease could not have been detected. As to the reasoning which prompted the exhibition of mercury, I shall say nothing; I shall leave this in your hands, as you had previously administered the remedy in this disease. I hope you will lose no time in giving us your paper, and I am sure its publication will be a most welcome and valuable addition to

our knowledge of the pathology and treatment of thoracic disease:

" I am, my dear Doctor,

" Sincerely and truly yours,

" D. J. CORRIGAN.

" To R. Cane, Esq., M.D.,

" Kilkenny."

The facts, I conceive, derivable from the cases now presented to the Profession are, that plastic bronchitis is a disease *sui generis*; that the sputa are essentially distinct from those bodies termed polypi, and which are no more than coagula, freed of the colouring matter of the blood; I allude to those found in the heart; and those sometimes ejected from the bronchi of patients who have had hæmoptysis. With those they have no character in common, except that of shape, being moulded in tubes of a like form; indeed it is unnecessary to dwell upon the differences, for the preparations, as exhibited on the plate, will at once display them. That as far as the two cases, now published, go, they are not indicative of phthisis, and that mercury is a certain remedy for cure, are facts the more valuable, because of the concurring testimony afforded by the valuable case of Dr. Corrigan.

ART. VII.—*Cases of Laryngitis.* By EDMOND SHARKEY, M.B.T.C.D., Allihies Mines, Berehaven.

I.—*Cases in which the Disease did not advance beyond the first Stage.*

DECEMBER 5th, 1833. A fine boy æt. six, was yesterday attacked with the following symptoms: fever; croupy cough and respiration in paroxysms; chest dilatable; epiglottis apparently thickened; tongue white, with prominent papillæ; pulse 104, firm; pressure on larynx externally produces pain; bowels free. Venesection to $\frac{3}{8}$ viii. produced syncope, after which

the breathing appeared easier, and had less of the croupy character. The child expressed himself relieved.

Sum. statim Calom. gr. viii. Pediluvium. Sumat quoque Calom. gr. ii. Pulv. Antimon. gr. i. 5tis horis.

He was well in a day or two.

May 5th, 1835. A child a year old, ill since morning, was brought to me this evening. Symptoms: cough, decidedly croupy; dyspnœa but little. I took $\frac{3}{4}$ vi. of blood from the jugular vein, producing syncope, and gave a solution of tartar emetic, which operated smartly on stomach and bowels. Ordered

Calom. gr. iii.

P. Ipec. gr. $\frac{1}{4}$.

Opii. gr. $\frac{1}{4}$. To be given every fourth hour.

On the following day cough was less croupy, and vomiting was produced by the powders; the hippo was now omitted; calomel and opium, as before, every third hour. Recovery took place rapidly.

II.—*Cases in which the Disease advanced beyond the first Stage.*

September 2nd, 1834. William Carter, æt. three years and a half, after two days' slight premonitory illness, was attacked by unequivocal symptoms of croup about 3 A. M.; when I saw him at 9 A. M., I found both cough and respiration strongly characteristic of the disease. I took $\frac{3}{4}$ vi. of blood from the jugular vein, (syncope ensued,) and ordered the following:

R Ant. Tart. gr. iii.

Aquæ $\frac{3}{4}$ i. Solve.

Sumatur. cochl. min. duodecima quaque parte hora ad effectum.

12 o'clock. Had vomited freely; stomach tranquil at present.

Sumat statim Calom. gr. x.

Pulv. Antim. gr. i. Warm bath.

Ordered that in two hours

Calom. gr. i.

Ant. Tart. Ipecac. a. gr. ss.

should be given and repeated every half-hour.

Half-past 6, P. M. Blood buffed and cupped; breathing less stridulous; fever diminished. A little blood drawn from the opposite jugular, again produced syncope. Five of the above powders have been taken and retained.

Repr. Pulv. ut antea.

10 P. M. Continues easy; skin of natural temperature; countenance pallid; pulse 120; bowels free.

Repr. Baln. Tepid. Continuentur Pulv.

Is much inclined to doze.

September 3rd, 9 A. M. Slept well; considerable mucous rale in trachea; breathing rather less stridulous; cough less ringing; has continued the powders since last report; they are all retained; bowels not free.

Habt. statim Pulv. ex Calom. gr. viii.

P. Rhei Scammoni ā gr. iv.

P. Jalap. gr. iii.

6 P. M. Bowels not moved.

Injiciatur enema domesticum statim.

Half-past 10, P. M. A good deal of hard fæces followed the enema. On looking into the throat there is nothing remarkable to be seen, except one or two aphthous specks on the tonsils, which are not enlarged, but are, as also the back of pharynx, more than normally vascular; considerable dyspnoea from the presence of some obstructing matter in the trachea; some tenacious mucus has been discharged in the act of vomiting, but no false membrane; I now touched the tonsils and back of pharynx as far down as I could reach with a solution of argenti nit. (ʒ i. ad ʒ i.)

℞ Calom. gr. ix.

Ant. Tart. Ipec. ā. gr. iii. M.

In chartulas vi. divide. Sumantur ut priores.

Necnon sumatur, si dyspnœa permolesta fuerit :

Pulv. Emet. ex Ipec. gr. xi.

Ant. Tart. gr. ii.

4th. Had a good night's rest. About an hour after last visit a good deal of mucus was coughed up, together with a piece of false membrane, followed by some fluid blood ; cough softer ; washed fauces again with sol. arg. nit.

Hab. Pulv. Emet. statim.

This emetic discharged a good deal of mucus. Bowels not being free, an enema was given, which procured a dark, tarry, feculent discharge ; has taken all the powders, which were, however, in general rejected ; the last was retained for two hours.

Repr. Pulvs. 2dis horis.

Half-past 7, P. M. Has just now had a fit of coughing, by which another piece of false membrane was extricated.

Half-past 10, P. M. Dyspnœa continues ; pulse still high ; flushings of face continually. Repeated the nit. arg. sol.

Repr. Baln. Tepid. et Pulv. ut antea. Infric. Ung. Hyd. Fort. 3 ss. regioni submaxillari.

5th. Another portion of false membrane discharged ; two dark motions from bowels. Repeated the emetic, the application of Nit. Arg. Sol. and mercurial friction ; mouth sore ; pulse 130.

6th. Considerable improvement ; to take one of the powders daily.

10th. Was this day attacked by a return of the tracheal rale and cough ; gave an emetic, which brought away another piece of false membrane, followed, as before, by a little blood. From this time he recovered rapidly. I have detailed this case at considerable length, as presenting some features of practical importance ; e. g. first, the extraordinary tolerance of tartar emetic, of which a great quantity was taken by this child with very little disturbance of stomach or bowels ; secondly, the utility of the nitrate of silver solution, assisted by emetics, in detaching

the false membranes ; thirdly, the great tendency to morbid secretions in the intestinal canal. In confirmation of the two last points I will relate another, but a fatal, case.

September 21st, 1834. Denis Harrington, æt. 3, after three days' previous illness, was attacked by croup. Above twelve hours were suffered to elapse from the development of the disease to relief being sought. Cough croupy ; respiration stridulous, but not much impeded.

V. S. a venâ jugulari ad 3 viii.

Solut. Ant. Tart. as in former cases.

Powders containing calomel and minute portions of P. opii, and tart. emetic, were given at short intervals. Warm bath.

In two hours after (7 P. M.) I opened the jugular vein of the opposite side, but nausea supervening, very little blood flowed.

22nd. Symptoms have abated.

27th. The child appeared so far relieved at the date of last report, that I yielded to the importunities of the friends, and allowed him to be removed home from a house close to my own, in which, when possible, I keep patients labouring under this complaint, for the purpose of frequent visits. Yesterday I was informed, that in the middle of the previous night he had been attacked with a renewal of the symptoms. I sent an emetic, and a blister for the nape of neck, desiring that the former might be given and the latter applied immediately, and the child brought back to my neighbourhood. The emetic was given, but the blister was not applied. He was brought back to-day. The blister was now applied, and the fauces washed with the strong nit. of silver solution, at the second application of which a large fragment of false membrane was brought up in a fit of coughing, which threatened suffocation. Great obstruction apparently in the trachea.

Repr. P. Emeticus.

I gave also, to-day, two of the powders of calom. tart. emetic and opium, before mentioned.

Half-past 11, P. M. The tartar emetic operated both on stomach and bowels; the discharge from the latter being described as black; blister rose; is sleeping without much tracheal rale or sibilous breathing.

Repetr. Haust. Emetic si opus.

Curetur locus vesicatus Ung. Hyd. Nit. Ox.

28th. (8 A. M.) A quiet night; dyspnœa recurred towards morning; no false membrane brought away by emetic; washed fauces and pharynx a good way down with the sol. nit. argenti.

Repr. Pulv. Cal. Op. et Tart. Ant. ter die.

30th. No dyspnœa, but complete aphonia; countenance very pallid; debility very great; bowels not free.

Habt. Pulv. Purg. Pergat c. Sol. Nit. Argent.

A low fever, with dark, dry tongue, and typhoid countenance, succeeded; little or no fluid was retained by the stomach. He died on the 6th of October.

Having met with an accident, I was unable to see the child after the 30th September, as often as before, and I have reason to think that an accumulation of morbid secretions took place in the bowels, a fetid, dark motion having passed on the day preceding death. Had this latter been prevented, the disease might probably have terminated favourably.

CASE V.—April 7th, 1837. 11 o'clock, A.M. Mary Shea, æt. 8, having laboured for three weeks under a bowel complaint, has presented within the present week symptoms of croup. (I could not ascertain the precise time of their development.) She is at present in a most distressing state; cough constant and severe, threatening suffocation; breathing stridulous and accompanied by a crowing sound; abstraction of about 3x. of blood from the jugular vein produced faintness and some relief, judging by the change of the symptoms. An antimonial solution was given, which produced free vomiting; applied a blister over sternum, reaching as high as the lower part of larynx.

Half-past 3, P. M.

Sumat omni hora Calom. gr. i.

Pulv. Opii. Ant. Tart. ā gr. $\frac{1}{2}$.

Half-past 7, P. M. Has taken four of the above powders ; just now washed tonsils and pharynx as low down as I could, with solut. nit. arg. The operation produced great dyspnœa and vomiting, but no separation of false membrane ; dyspnœa very great ; pulse intermittent ; countenance ghastly ; continue powders.

Half-past 9, P. M. Applied sol. arg. nit.

Habeat negus.

11, P. M. Blister has risen well ; washed fauces again ; pulse very rapid ; evident sinking ; the stethoscope applied over both mammary regions indicates the admission of very little air, accompanied by slight sibilous rale ; no membrane has been detached.

Continuatur negus.

April 8th, 8, A. M. Same state ; pulse not more intermittent than yesterday ; countenance *rather less* cadaverous ; drinks freely ; touched fauces again, and gave a hippo emetic, which brought up merely some tenacious mucus, that on inspection was found to have been not sufficiently tenacious.

Half-past 7, P. M. Fauces have been washed occasionally during the day with the sol. nit. arg.

Half-past 9, P. M. Repeated the emetic, adding some ant. tart. No membrane ejected.

11, P. M. Repeated sol. nit. arg., and applied a plaster, consisting of pix Burgund. and ant. tart. over the site of blister.

April 9th. Countenance *less* ghastly ; pulse 130—140, not intermitting ; sleeps with mouth open ; during inspiration a loud snoring sound, during expiration a tracheal, but not snoring sound, is emitted ; pain of bowels ; the epiglottis, on examination, does not seem thickened. Continue sol. arg. nit.

St. statim. Ol. Ric. $\frac{3}{4}$ ss.

Tinct. Op. gr. vii.

Haust. Emet. vesperi.

10th April. Her friends, having become desponding, took her home yesterday ; said to be in the same state ; griped still.

Repr. Haust. Ol. c. Tr. Op. et Haust. Emet. vesperi.

Continue Nit, Arg. solution.

11th. Reported worse ; breathing more difficult, but said to be relieved by application of nit. arg. sol. ; dysphagia. Died!

The last two cases, though having a fatal termination, I have brought forward mainly for the purpose of confirming Professor Mackenzie's opinion in favour of the topical use of the nitrate of silver in solution to the fauces and pharynx, as tending not only to assist in throwing off the *adventitious* membrane already formed, but, also, to prevent the further formation of it, and, as every one must admit, alleviate the attendant distress of breathing. The *paramount importance of prompt and decided measures* will appear from the following statement :—Of thirteen cases which I have noted, nine recovered, and of these nine, seven were seen within twenty-four hours after the laryngeal symptoms had set in, and were bled largely and *antimonialized freely* ; the four fatal cases were those of children, in whom the first symptoms were overlooked for a longer period than that above mentioned, or, whose residences were so remote as to preclude the possibility of my frequent visits, and in whom, consequently, the disease was allowed to go on, in a great measure, uncontrolled. There is no disease which stands so much in need of the constant, I almost say hourly, attention of the physician as well as the persevering, well directed efforts of the attendants. This is well expressed by Pinel, as follows :—

“ Mais c'est dans des cas semblables que le medecin a besoin d'être secondé par le zèle et les bons offices de tous ceux qui entourent le malade, par les soins les plus assidus et les plus infatigables, soit de jour soit de nuit, par une succession ou une alternative continuelle des moyens internes et externes déjà proposés, soit pour déranger l'ordre des mouvemens et la direction vicieuse qu'affecte la nature en obstruant les voies de la respi-

ration, soit pour empêcher une sorte d'assoupissement qui se renouvelle sans cesse, et qui semble donner un nouveau degré d'intensité à la maladie."

So far as my experience goes, I think I am warranted in recommending strongly the combination of calom. hippo and tartar emetic, occasionally combined with opium, in this disease ; and I may here observe, that in the somewhat analogous disease of pleuritis with tendency to effusion of coagulable lymph, it seems also a very efficient one. With respect to the powerful adjuvant of counter-irritation, I fully coincide in the opinion of Drs. Maunsell and Evanson, that blisters not immediately over the larynx are to be preferred ; they recommend their application over the sternum. I have applied them in this situation, and to the poll with apparently equal advantage in the election.

In a disease which runs its course so rapidly, and for which such a variety of remedies is laid down in systematic works, I know well, from experience, the perplexity of a young practitioner brought for the first time to treat a case ; and I am not without hope, that the present contribution may prove an assistance to some member of the Profession so circumstanced ; if that expectation prove well founded, I will consider myself amply repaid for any time or trouble which the present report may have cost.

ART. VIII.—*Observations on the Use and Abuse of Mercury.*

By CHARLES LENDRICK, M.D., T.C.D., Queen's Professor of the Practice of Medicine, Clinical Physician to Sir Patrick Dun's and to Mercer's Hospitals, &c.

IN a former number of the Journal, (that for May, 1837,) I remarked, that the venereal disease is especially illustrative of the morbid, and the beneficial operations of mercury on the human system, and that valuable inferences may be drawn from its use and abuse in that disease, as to the mode of its administration in others.

Dr. Colles justly observes in the preface to his work, that "in the whole range of surgical diseases there is not one which may, with more justness, be styled the opprobrium of surgery, than the venereal disease;" and Sir Astley Cooper states, in his lectures, that the treatment has gone rather backwards than forwards during the preceding twenty-five years. Some progress may, in my opinion, be made in accounting for this state of things, by questioning the prevalent notion, that the venereal is a surgical disease. Local applications are, no doubt, often, and trivial surgical operations sometimes necessary; but the same might be said of other diseases, undoubtedly medical in their nature. Sir Astley Cooper considers the knowledge, when to use and when to discontinue mercury, as being the great desideratum in the treatment of syphilis, and the qualification which constitutes the real difference between the skilful and the unskilful practitioner; so does Dr. Colles, and almost every man of experience. The difficulties are then, probably, not of a surgical nature, nor to be surmounted by an application of the principles of "surgery."

I feel satisfied that much of the mischief consequent on the over-use or under-use of mercury in syphilis, has arisen from practitioners reasoning according to the terms loosely used by authors, as if they were founded on established principles. Such are "the venereal virus, absorption of the poison, genuine syphilis, the real Hunterian chancre, &c." All this is very well, if the words be used in a mere conventional sense, as a brief mode of expressing what would otherwise require periphrasis; but if inferences are made from alleged facts, the reality of which is without proof, it is not surprising that the conclusions should be unsatisfactory and unsound.

It is, for instance, altogether illogical to entertain the oft put question, as to the identity of the poisons of gonorrhea and syphilis; where it has never been ascertained, how many diseases go under either name, or how far the agency can be appropriately compared to that of a poison. Much of the controversy on this

point might have been settled, by a strict definition of the terms, instead of by disputing about the applicability of vague expressions. The reasons alleged for the use of mercury, its influence in preventing absorption, and its power of extinguishing the "virus," were clearly untenable. The anti-mercurialists, on the other hand, instead of attacking the assailable points of their adversaries, too often assaulted their really strong holds, and failed accordingly. That "a bad reason is worse than none," is almost a proverb; and much as I dislike empiricism, I am convinced that mere stumbling practice, derived from facts independently of reasons, is safer and more successful than that founded on principles hastily assumed, and liable to be controverted.

In dealing with the question of the identity or diversity of poisons, let it be borne in mind that the controversy concerns the nature of the disease, which one person has contracted from another; and that in deciding the point at issue, reference must be had, not only to the original disease in the infecting party, but also to the modification it undergoes, by the constitutional peculiarities of the infected. We know that almost every imaginable diversity will ensue from the latter cause; not only, as to whether the ulcer shall be sloughing, phagedenic, irritable, indolent, &c.; but even as to whether there shall be any disease at all, where the same modes that had produced it in other cases have been in operation. Much, also, depends (as the late Mr. Todd remarked) on the stage in which the disease might have been in the infecting agent. Now, if we take account of the variations arising from these two circumstances, the different stages of the disease in one party, and the modifications it undergoes by the constitution of the other, to say nothing of the changes that almost every disease is liable to during successive years of propagation, it will be admitted, that to enter into disquisitions about the present or past identity of poisons, is to engage in a controversy without meaning.

In whatever way the infection is accomplished, some degree of local inflammation ensues as the result. In the peculiar charac-

ters of this process, we can have little difficulty in recognizing those of "specific" inflammation, or that form of inflammatory action which is modified by disease, so as to cause it to pass through another than the usual course. Now we know that specific diseases in general have a tendency to affect a particular tissue, or a certain portion of structure, in preference to others. Thus gout or rheumatism seems to prefer the fibrous tissue, and scrofula the glandular; the former principally attacks the foot, and scrofulous inflammation, if involving the lung, has a tendency to affect its upper portion. The specific nature of the venereal disease, were other proof wanting, might thus be shown from the secondary affection selecting the throat, and various tissues in succession, ending with the osseous, where it seems to show a preference for the tibia and bones of the skull,—a circumstance not to be accounted for satisfactorily, from the exposure of these parts to the influence of the air, or any other cause than the specific nature of the inflammation,—which is, indeed, nearly the same thing as admitting that we know nothing about it.

A little, however, we do know; and we cannot be surprised that the different forms of disease bearing the name of venereal, should show the same variety of preference that other specific diseases do, with respect to their site; or that one should prefer superficial and another deep seated structure. Thus we find one form displaying remarkable affinity for the muco-cutaneous tissue, and principally attacking the part where the external and internal portions unite, such as the inch near the orifice of the urethra and the glans penis (if the surface be tender.) The same form, while it is with difficulty made to produce ulceration of the genital organs, even by inoculation, readily attacks the tender membrane near the anus, and unlike other venereal diseases, is capable of producing violent and purulent ophthalmia, by contact with the conjunctival membrane of the eye.

Another form of venereal disease, while it shows but little affinity for the skin or mucous membrane, yet, if the matter be long retained in contact with the former, or be enabled to act

through it, by means of excoriation, displays its preference for the *cellular* tissue, and causes deep ulceration, or excrescences. Between these extreme forms there seem to be innumerable varieties, with different degrees of affinity for mucous or cellular tissue, and producing, concurrently, two or more of the species—purulent superficial inflammation, patchy excooriation, superficial ulceration, deep ulceration, or excrescence.

It was one of the errors consequent on incorrect reasoning about the venereal disease, and the assumption of the principle of absorption, that secondary symptoms were supposed to follow as a necessary consequence on the primary. It has, however, been fully ascertained, that no such inevitable relation of cause and effect exists, even in cases left to nature; and that the occurrence of secondary symptoms among a given number of cases, is a question as to relative amount. We find that in proportion as the disease has an affinity for cutaneous structure, constitutional symptoms are with difficulty produced, even by inoculation through a wound. *E contra*, in proportion to the affinity for cellular tissue and the tendency to cause deep ulceration, are secondary symptoms likely to occur. It is, indeed, doubtful whether *some* degree of ulceration be not essential, as a character of that form of local disease, which is followed by constitutional symptoms.

We observe in general, also, that in proportion as local venereal symptoms are attended by *inflammation*; whether this be characteristic of the peculiar form of disease, (as it usually is, of the superficial species,) or otherwise induced, the constitutional affection is less likely to occur, or at least to present itself in a formidable shape. This fact seems to open important inquiries with respect to the treatment of the disease; for instance, whether the production of inflammation artificially, be not an effectual mode of stripping the affection of its specific characters, and rendering it innoxious to the constitution. Other specific diseases, we know, thus lose their constitutional peculiarities: cow-pock, for ex-

ample,* which fails in affecting the constitution if inflammatory disease be present, or if inflammation exist in the infected parts.

This naturally leads to the determination of the question, as to how far what is called the "specific" operation of mercury in syphilis, be really identical with the production of an inflammatory action of the constitution, under the presence of which, that disease is stripped of its specific characters. Against such a supposition it may be alleged, that mercury is itself a powerful antiphlogistic remedy; but it is to be recollected, that it is in the secondary, or subacute stage of inflammation, and after the use of due depletory measures, that mercury can be had recourse to with safety or efficiently; rather to remove the disorganizing effects of inflammation by its brief administration, than the inflammatory process itself. At any rate, whatever be the *modus operandi*, the inflammatory nature of what is termed the healthy operation of mercury, is unquestionable. The patient is obviously in a state of inflammatory fever, and blood, if drawn by venesection, usually puts on the buffy coat at this time.

In venereal cases, we rarely, as Dr. Colles remarks, have an opportunity of observing throughout, the spontaneous course of the disease—as few patients will consent to the omission of mercury for any considerable length of time. The unwearied researches of Dr. Colles seem, however, to have established the fact, that the successive orders of venereal symptoms take place, not uninterruptedly but periodically, and that each outbreak of fresh symptoms is followed by a remission, if not a temporary cessation of the disease. Few practitioners of experience will hesitate in concurring with him, as to this view of the progress of the malady.

If then, at the first occurrence of venereal symptoms, while

* The character of Cow-pock, as a specific disease, is to attack superficial structure. Such are the traces observed on the cicatrix in successful cases. Participation by the cellular tissue is an indication of a spurious form of the disease.

the disease, though specific, is as yet local, these symptoms be completely removed by exciting the inflammatory action of mercury in the constitution; we might, on theoretical principles, be induced to hope, that the whole series of symptoms would be nipped in the bud. Such is indeed almost always the case, if mercury be early, efficiently, and sufficiently used. The practitioner who duly estimates the destructive characters of syphilis, continues the administration of the medicine, not only till all visible or tangible evidence of local disease has been removed, but somewhat longer, as the phrase is, "to guard the constitution;" but really, in my opinion, with the effect of altogether curing the disease, by removing those *remains* of the primary affection, which are not cognizable by the senses of the observer. As the practitioner has no sign of the precise period at which he ought to close the mercurial action, he wisely rather protracts than abbreviates it, if he wishes to do his work well. Hence the utility of the maxim, to continue the administration of mercury for at least a week after the hardness consequent on the healing of ulceration has subsided.

When mercury is used at a subsequent period, whether secondary symptoms have or have not appeared, the result is different. Existing venereal affections yield to the mercurial fever as readily as the primary do; but after the series is once established, no quantity nor mode of administering mercury, seems to be efficient for the prevention of future disease. At the same time, I am inclined to believe, that if the existing symptoms have been cured by the judicious use of mercury, those that may occur hereafter will be more mild, manageable, and more likely to subside without the further aid of the remedy, than if it had not been had recourse to. In making this assertion, I wish to be understood as contemplating those cases *solely*, where mercury has been moderately used, and where it has agreed with the constitution throughout; I am quite aware that its unhealthy operation renders the case more unfavourable and intractable, than if it had not been administered.

There are, however, cases where even what is termed the healthy operation of mercury on the system, may disagree with local symptoms. Such are those where high inflammation is present. This fact seems to confirm the opinion as to the inflammatory action of mercury, and its influence thus on the venereal disease. The parts are unable to bear an aggravated inflammatory action, as produced both by the disease and the remedy.

In proportion as the operation of mercury tends from the vascular towards the nervous system, is its influence on the venereal disease observed to be first inoperative, and then prejudicial. This deviation (as I formerly remarked) often takes place with rapidity and unexpectedly, although the progress of the case had been previously favourable. Hence the practitioner ought to be constantly on the watch for its occurrence, in order that the administration of mercury may be at once laid aside. Any time spent during the unhealthy operation of mercury is not to be looked on as merely lost, but as actually lengthening the period of cure ; by putting the symptoms astray, and by introducing others, which may require careful management for their removal.

The principle of the diversity of effects attendant on the various operations of mercury, and of the extreme forms being actually opposite in their nature, is exemplified in other diseases as well as in the venereal. In dropsy, hepatitis, pneumonia, and every disease where mercury is advantageous, we observe that, in proportion as its action deviates from the vascular towards its other operations, the beneficial agency on the disease becomes first suspended, and is then followed by deterioration. Increasing debility, with accumulation of fluid, in dropsy ; sallowness, emaciation, and cachexia, in affections of the liver ; or softening of the lung, with the development of tubercles, in pneumonia, rapidly follow on the change in the operation of mercury. The effect is often more marked, indeed, than in the venereal disease, in consequence of these affections being treated more frequently

by means of a quick and large exhibition of the remedy. Hence we deduce the important rule of withholding mercury in such cases, after it has once affected the mouth, and of being very cautious in resuming it.

When we say that mercury disagrees with a specified disease, we speak vaguely. Under the same name "mercury," are included various, and even opposite actions, of which the disagreement of some is no proof, but, perhaps, the reverse, as to the salutary effects of others. It is, for instance, often said that mercury is injurious in scrofula, or in a scrofulous constitution; and if it be meant, that what are the *morbid* operations of mercury in other diseases, are so here; or that such operations are more likely to occur in scrofulous than other constitutions; all well; but if it be asserted, that cases which would otherwise require the healthy operation of mercury, ought to be treated without it, merely because the patient is scrofulous, the statement is without foundation, inasmuch as, not only are such cases treated successfully with mercury, but mercury is even used with advantage for the cure of diseases, absolutely scrofulous in their nature.

It cannot be denied, however, that the morbid action of mercury is more readily excited in the scrofulous than other constitutions, and that, for the simple reason that, where the system is already diseased in *any* way, such morbid action is more readily produced. Thus Sir Charles Scudamore adduces instances of the ill consequences of the active use of mercury in the *gouty* constitution, as conclusive as most of those quoted, with respect to the scrofulous.

It is often said, that mercury "rouses" a latent scrofulous tendency. It is, however, illogical to assert that a thing has been revived, whose previous existence cannot be proved. I am inclined to think, that the variegated state termed scrofula is frequently not roused, but actually produced, by the morbid action of mercury, and that the effect is put for the cause. We know that other pernicious operations on the system, from bad air, food, habits, &c. are sufficient to *cause* scrofula.

Syphilis, scrofula, and the operation of mercury are gene-

rally admitted to form an unfavourable ternary compound. In such cases the blame is usually laid on the connexion of the last with the second, and where pulmonary consumption takes place, it is attributed to the action of mercury on the scrofulous diathesis. But this conclusion is too hastily formed. It ought to be considered, whether the disease of the lungs be not referrible to the production of a scrofulous state, by means of an affection such as syphilis, which has so strong a tendency to attack the *glandular system*,* and to produce hectic symptoms. Thus syphilis, *in itself*, may produce phthisis. Within the last year, I have seen three or four cases of phthisis pulmonalis attending secondary symptoms of syphilis, where *no* mercury had previously been used. I know also of one instance, from unquestionable authority, where in a patient previously labouring under phthisis, mercury was used for the cure of recent syphilitic primary symptoms, not only with success, but also with the subsidence of the phthisical disease.

Have we then in *some* of the mercurial actions, not only means that may be safely used in the scrofulous constitution, but which are curative of those scrofulous diseases in which mercury has so long been considered as pernicious? Hydrocephalus is illustrative: so are some affections of the joints; and Doctor Stokes, one of the highest authorities on diseases of the chest, expresses himself as being doubtful with respect to the effects of mercury in phthisis pulmonalis.

What I wish especially to impress is, the distinction between the various forms and grades of mercurial influence; so that from the mere term "mercury" nothing conclusive can be inferred either as to beneficial or pernicious operation in a specified disease. That it should be found to be most injurious in those maladies, in which its curative effects are most remarkable, or *vice versa*, is not extraordinary, when we recollect that *opposite* agencies (although classed under the common title of the medicine) may reasonably be expected to produce opposite

* Syphilitic affections of the *lungs* have been noticed by Dr. Graves.

results. Hence discrimination, not only of the cases, but of the stages of the same case, in which mercury may be appropriate, or the reverse, is often calculated to tax the utmost skill of the medical practitioner.

HATCH-ST., DUBLIN, *January, 1840.*

ART. IX.—*Cases, with Observations.* By ROBERT F. POWER, Member of the Royal College of Surgeons in Ireland, and one of the Surgeons to the Coombe Lying-in Hospital, &c.

[Read before the Surgical Society of Ireland, November 24th, 1839.]

CASE I.—*Scirrhus Tumour, affecting the Parotid Gland.*

THE parotid and inferior maxillary regions are often the seat of glandular enlargement, or tumours. These are generally situated, either beneath the angle of the jaw, and affecting the sub-maxillary gland, in the lymphatics connected with it, or the parotid gland; or that body itself may be the source of the disease. They may be either mild or malignant in their character, and even when non-malignant, often cause so much inconvenience and distress to the patient, as to call for extirpation. The depth to which they may extend, and the important parts with which they are connected, render their removal an operation requiring much coolness, dexterity, and anatomical knowledge. This operation is much more formidable when the parotid gland is virtually the seat of the disease; and its extirpation was, and is even still considered by many to be impossible, on account of its deep attachment and intimate connexion with the great vessels of the neck. Mr. Kirby, however, proved its practicability, and was the first surgeon in these countries who successfully removed this gland in a state of scirrhus enlargement. Mr. R. Carmichael in Dublin, and MM. Klein and Beclard on the Continent, performed similar operations: and Dr. Warren, of Boston (U.S.) gives two successful cases in his work on Tumours. Mr. Goodland, of

Bury, in removing an immense tumour from the side of the face, states that he completely extirpated the parotid gland.

The nervous phenomena which attend these lesions are extremely interesting, more particularly when viewed in relation to the important discovery by Sir Charles Bell, of the functions of these nerves. The train of symptoms accompanying affections of this region afforded a clue to this discovery, and the arguments derived from them were ingeniously arrayed by the talented author in its support. These symptoms, however, are not always uniform, and may be complicated or modified in such a manner as to lead to erroneous and contradictory impressions upon the subject. A case of scirrhus tumour affecting the parotid gland lately came under my care, and as some of the attendant phenomena were at variance with those usually observed, I will offer it to the consideration of the Society. In this case the disease originated in one of the lymphatic glands over the parotid, but ultimately a portion of the latter became morbidly engaged.

Tumours of the lymphatic glands have been divided into three species, namely, the *scrofulous*, *scirrhus*, and *fungoid*. The second order has been subdivided into the non-malignant and the malignant. This is a distinction which I think in many cases depends chiefly upon the length of time the disease has existed, or its latent malignity being aroused by constitutional external disturbance. In some diatheses it will be much more active than in others; and there are cases in which the malignant character becomes rapidly developed and extended, while in other instances glands have remained indurated and quiescent for years.

In the present instance the patient was a country woman, named Anne Murray, about forty years of age, apparently healthy, and of active and industrious habits. She stated that in the spring of the year 1831, she felt a small, hard swelling, about the size of a pea, above the angle of the lower jaw, on the left side, preceded, for a few days, with pain in the ear,

which she attributed to cold. The tumour enlarged gradually and equably, preserving its original hardness, and at present has attained considerable size. While it remained moderate, it gave scarcely any annoyance; but when it acquired about a third of its present dimensions, it occasionally produced much pain.

In the course of the last month, the patient called on me for advice, as the tumour was then giving her a great deal of uneasiness; but as she was only about five months after her accouchment, and was suckling, I sent her back to the country for the purpose of weaning her child. On the 10th of the present month she returned, and I then carefully examined the tumour. It was hard and resisting to the touch, but on the jaw being fixed, was slightly moveable; it occupied the external part of the parotid gland, displacing the lobe of the ear, extending to the zigoma, and back to the sterno-mastoid muscle. This cast will shew the extent and appearance of the tumour. She described the pain as sharp and tingling, often causing deprivation of sleep, and considerable difficulty in mastication.

The left eye has lately become painful and oblique internally; the sight of it is also impaired; a feeling of uneasiness and soreness pervades the whole left side of the face, extending to the forehead, and round the back part of the head. The tongue when protruded is bent to the left, and that half of it is much smaller, flabby, and with an impaired sense of taste. The speech has suffered a little. Her general health has always been good; but latterly, since the tumour has grown larger, and the tongue become affected, digestion appears to be injured; her bowels are often constipated; she has lost flesh, and her body generally appears not so well nourished as formerly.

November 15th. As the tumour produced a good deal of distress, and as its excision appeared practicable, after a consultation with Mr. Kirby I proceeded to remove it. I first prolonged an incision from a little above and behind the lobe of the ear, obliquely downwards and forwards, below

the edge of the tumour, and from the side of this incision I directed another transversely forwards to its anterior edge, (the directions of the incisions are marked upon the cast,) dissecting back the flaps; I next divided the fascia on a director, and exposed the tumour. Part of this dissection was tedious and difficult, in consequence of a portion of the fascia and parotid gland being internally adherent to the cyst, and which I thought advisable to remove freely, in consequence of its having a hard and gritty feel. With my finger and the handle of the knife I tore up the attachments of the tumour, only using the cutting edge when the adhesions were too strong to yield otherwise; in this manner I exposed the masseter muscle and ascending ramus of the jaw, behind the posterior edge of which I now found that a full, nipple-like process of the tumour dipped deeply. Plunging a double hook into its substance, it was pulled downwards by Mr. Kirby, who gave me his valuable assistance on the occasion, and I was then enabled to separate its attachments as far back as the styloid process, after which its removal was speedily effected. There was scarcely any hemorrhage during the operation, only some small arterial twigs having been divided, and which speedily retracted after a little exposure to the air: I then brought the lips of the wound together with two points of the interrupted suture and adhesive straps, over which I applied compresses wet with cold water, and secured them by a tight bandage.

On the 17th that side of the face was inflamed and swollen; she complained of great distress from the accumulation of saliva and mucus in the throat, which she had not the power to eject, and which causing a dread of suffocation, prevented her from sleeping; bowels had been twice opened by a calomel bolus and saline mixture. I removed the sutures, and dressed the wound with adhesive straps and bandage.

21st. Light poultices having been applied, the inflammation had subsided; the wound was partly united, and partly suppurating; the pus was healthy, and the pituitary distress had

altogether abated. She states that the numbness has left that side of her face, to which the natural sensation has returned, with the exception of about the outer third of her under lip. The tongue too is much less curved towards the affected side, and feels firmer; she says, however, that the taste in that part is "still queer." There is drooping of the upper eyelid, amounting to ptosis, and she complains of great numbness in it, and over the brow; the lower lid is very little, if at all affected. Bowels regular, appetite good, and, to use her own expression, she is every other way healthy.

23rd. The wound looks healthy, and is partly united; the paralysis of the upper eyelid is still present, but the numb feel has given place to an itching, pricking sensation. The eye is suffused with tears, but the obliquity observable upon the operation has disappeared. The orbicular muscle is natural, and perfectly under control. The motions of the eye are limited and unequal; she can turn the pupil slightly inwards, upwards, and downwards, but not at all outwards; the pupil is very slightly dilated, and its motions are sluggish. In size and appearance the tumour resembles a double potato, the smaller one being attached by a short neck, which was moulded upon the edge of the ramus of the jaw; the larger portion is firm and heavy, while the lesser feels more pulpy; a section displays its scirrhus character, compact and hard, with white fibrous bands radiating through its structure; at a point or two it appears as if the softening process had commenced; the smaller part is softer, and not unlike medullary matter, which seems to have been deposited in cells; hard points are here and there perceptible, which had not as yet degenerated from their original scirrhus appearance. The portion of parotid gland which was removed seems to be incorporated with the anterior edge of the tumour, as it is impossible to separate it at this place from the covering of the latter; this section shews how intimately they are connected.

Previous to the removal of the tumour, there was no loss of

motion or paralysis of any part of the face, she complained alone of want of sensation, and this both Mr. Kirby and myself defined with our fingers, tracing it over the whole left side of the face, to the medial line in front, and behind the ear to the occiput.

The nerves which suffered from the pressure of the anterior portion of this body, were chiefly the facial branches of the *portio dura*, and some of the superficial facial branches of the second and third divisions of the *fifth*, (the superior maxillary, and the temporal branches.)

According to the theory of Sir Charles Bell, the branches of the *portio dura* "control the motions of the features, performing all those motions, voluntary or involuntary, which are necessarily connected with respiration; such as breathing, sucking, swallowing, and speaking, with all the varieties of expression." (On the Nervous System, &c., page 96.) In this work the learned author enumerates instances, in which the *portio dura*, or respiratory nerve of the face, as he terms it, was injured either by accident, or in operations similar to the present, or by "glands pressing upon it, and the result was loss of motion of that side of the face, wasting of the muscles supplied by it," and even "horrible distortion of the face, by the prevalence of the muscles of the opposite side." (Op. cit. p. 97.)

In all those cases, the sensibility of the parts was perfect. Mr. Mayo's experiments have led him to the conclusion, that the *portio dura* "is a simple voluntary nerve." (Physiol., p. 260.)

The other nerves affected by this tumour were filaments from the second and third divisions of the fifth pair. Sir Charles Bell classes this as a *sentient* and *motor* nerve, and instances cases of tumours pressing upon its roots and wounds of its branches, destroying the sensibility alone of the parts to which they were distributed. The motor division of the nerve passes under the gasserian ganglion, and free of it, but joins the third grand division, after passing the foramen ovale. "At this

point, the muscular and sensitive portions of the nerves are matted together," and the "filaments of both portions are here so complexly and intimately combined, that all the branches which go off after this union, are compound nerves, and have motor filaments in their composition." Mr. Mayo considers that the facial branches of the fifth are exclusively "sentient nerves," (p. 261), and that "the ganglionless portion of the fifth, and the hard portion of the seventh nerve, are voluntary nerves, to parts which receive sentient nerves from the larger or ganglionic portion of the fifth."

Adopting either of the views above stated will not elucidate the phenomena exhibited in Murray's case. Here both the facial branches of the fifth and seventh were affected, and loss of sensation alone was the result, and the paralysis which ensued after the operation, in which branches of both must have been divided, was of parts whose motor power is not derived from either of those sources. A remote anastomosis certainly exists between the branches of the third, which supply the motor power to the levator palpebræ, and the sentient twigs of the superior divisions of the fifth. But even admitting this anastomosis to be better defined than it really is, we are not warranted in supposing, that a reflex action could take place between the sentient and motor branches of distinct nerves.

The paralysis, and imperfect sense of taste of the left side of the tongue, and which indicated a deeper position of the tumour than appearances warranted, may be accounted for by the presence of the posterior lobe of the tumour, which dipped back, and pressed upon the lingual nerve, between which and the gustatory nerve, there is occasional direct continuity; from the position of this process too, it may have exercised direct pressure over the sentient nerve itself. The curvature of the tongue towards the affected side was caused by the posterior fibres of the right genio-hyo-glossus muscle, which, when the tongue was protruded, not being resisted by its antagonist, pulled the base to the right, and thus directed the apex to the

opposite side ; its action in this way, may not be inaptly compared to that of the rudder on a ship.

I fear we must refer the paralysis of the muscles of the orbit, to disease situated within the cranium.

Tumours of this nature are not always solitary, and frequently after the removal of one, the disease will break out either in the adjoining, or in some remote region, and perhaps in the present instance, another tumour may be situated at the base of the cranium, near the foramen lacerum, or immediately at the entrance of the orbit, and by pressing then upon the third, fifth, and sixth nerves, produce the train of symptoms now apparent.

A few days after the above was written, the patient left the hospital, the wound being perfectly healed, and in about a week later, I met her going to the canal-boat, on her return to the country. She then complained of rheumatic pains extending down the hip and thigh to the knee, which she attributed to cold, consequent upon the change of her bed. The ptosis was still present, and she said the sight of that eye was quite gone, the pupil was but very slightly dilated, indeed not more so than the opposite one, and still obeyed the stimulus of light. The eyeball was not all protruded, nor was there any other symptom present indicative of internal disease. I could not prevail on her to remain in town, but as she lives near the residence of my friend and late pupil, Surgeon R. Banon, I have hopes of hearing the further history of the case, and in the event of her death, and his getting permission to make a dissection, of being supplied with an accurate description of the morbid appearances.

(To be continued.)

ART. X.—On a Preparation of Iron lately introduced into Medicine in France : its Inefficiency : and on the best Mode of producing and exhibiting the true Protoxide of Iron.
By M. DONOVAN, Esq.

OBSERVATION of the extraordinary difference between the effects on the animal economy of the soluble and the insoluble preparations of iron, has disposed medical practitioners to the belief, that this metal is only active when in the soluble state. Thus the salts are efficient remedies, while the true peroxide, which is difficultly soluble, even in the stronger acids, is powerless. The mixed oxide which exists in the precipitated carbonate of the pharmacopœias is partly soluble in weak acids, and is accordingly found useful in some diseases. But the protoxide, in certain states of diminished cohesion, is the most easily dissolved, and hence has obtained no small character as a chalybeate. Nay, even the magnetic iron ore, as being the protoxide, has had its admirers, notwithstanding its hardness. It has, therefore, been an object with chemists, to procure the protoxide of iron in such states as permit its easy solution in the stomach. The hydrated carbonate of the protoxide, obtained by precipitating solution of protosulphate of iron with carbonate of soda, and administered before it can have absorbed any considerable quantity of oxygen, has been a favourite. When rightly prepared, it dissolves instantly in the weakest acids ; and perhaps may be soluble in animal fluids existing in the stomach, even those which are not of an acid nature. But it is exceedingly difficult to prevent its absorbing oxygen to an injurious extent.

About three years since, Dr. Becker of Mulhausen, discovered a simple process by which the precipitate arising from the decomposition of proto-sulphate of iron, by carbonate of soda, may be in a great measure prevented from absorbing its second dose of oxygen, and dried in a state of oxidation, not very dif-

ferent from that in which it existed at the moment of precipitation. The following is the process, as detailed by M. Klauer, apothecary of Mulhausen:—

Protosulphate of iron, prepared according to the process of Bonsdorff, or Berthemot, is to be dissolved, by heat, in water previously deprived of air by ebullition. The solution is to be filtered into a flask, so prepared that it may be closely stopped when all the liquid has passed through. A solution of carbonate of soda is also to be made, in water deprived of air: this is to be poured into the former solution; and the flask carefully stopped. When the precipitate has fully subsided, the supernatant liquor is to be poured off; the protocarbonate of iron is to be thrown on linen, and thereon it is to be washed as well, and as speedily as possible with boiled water. As soon as it has drained, it is to be put into an evaporating capsule, and sugar being added, in the ratio of two parts to one of protoxide, the whole is to be hastily evaporated to dryness. By the addition of the sugar, the paste in the capsule becomes liquid; carbonic acid is disengaged; and the oxide assumes a blackish green hue, which it retains when converted into powder. This is what the French call *sucré ferrugineux*.

M. Klauer has shown that in 100 parts of this powder there are 4.375 of tritoxide of iron, and 17.950 of protoxide. This result proves that the presence of sugar prevents the greater part of the protoxide from passing to a more advanced stage of oxidation.

It would appear that in this case the sugar enters into combination with the metallic oxide, as it does with oxide of lead. The affinity for oxide of iron has been proved to exist by a fact pointed out by Rose: and I find, that if protocarbonate of iron be heated with colourless syrup, the solution, when filtered, is yellow, and has a decidedly chalybeate taste. On these accounts, I do not think that saccharine matter exerts any deoxidating power on oxides of iron, (although the efficacy of sugar,

as a deoxidating agent, is fully evinced on the salts of copper and silver,) but that the sugar and iron enter into combination, and that the affinity is sufficiently energetic to resist the tendency of the iron to peroxidation.

This explanation is rendered probable, by the fact that if all the uncombined sugar be washed away, by frequent ablutions with water, the compound, when exposed to air, will not absorb its second dose of oxygen.

M. Klauer has observed that mineral waters, in which iron exists as a protoxide, are better preserved in that state by the addition of sugar, and are prevented for a longer time from depositing an ochreous powder.

M. Vallet substituted sugared water in this process, for water deprived of its common air by boiling; and by using honey, (which he preferred as a substance possessed of remarkable power,) gave the pillular form to this compound.

Neither the ferruginous sugar of MM. Becker and Klauer, nor the ferruginous honey of Vallet, however, contains the iron altogether in the state of protoxide: the colour of both, as is remarked by M. Berthemot, is greenish,—a sufficient indication of the commencement of alteration.

There can be little doubt that a great number of substances possess the property of arresting the progress of oxidation in iron. Sugar, honey, and extract of liquorice are well known as agents evincing this power. I have long been acquainted with the fact that myrrh possesses the same quality. I had always observed that the *Pilula Ferri Composita* of the Dublin Pharmacopœia, when prepared in all respects as it is there prescribed, remained of a deep olive-brown colour, even on the outside, and did not become rusty-brown, from the formation of percarbonate of iron, although it would have done so were it not for the presence of some counteracting agent. I convinced myself that the myrrh was active in this respect, by leaving out the sugar and treacle, but it never occurred to me

that the sugar or treacle might act similarly.* It appears a curious fact, that the discovery of MM. Becker and Klauer should thus have been anticipated in the above-mentioned pill, and in the long-known and generally-employed Griffith's Mixture, although, singular to say, this chief quality, for which both preparations are remarkable, has not hitherto been recognized. Dr. Williams, Professor of Materia Medica in the College of Surgeons, has shown me a bottle of Griffith's mixture, prepared by him four years since, which retains the green colour assumed by iron, when, although chiefly protoxidated, it has absorbed as much oxygen as is necessary to convert some of it into peroxide.

Griffith's mixture is distinguished by another quality, which renders its constitution interesting. The myrrh seems to possess the property of preventing the precipitation of the protocarbonate of iron, and of actually adhering to it in such a manner as to hold it suspended for several days. If very pure myrrh and carbonate of soda be triturated, with gradual additions of water, and if the proper quantity of protosulphate of iron dissolved in a little water be added, the whole will pass through a paper filter; but if the same quantities of protosulphate of iron and carbonate of soda, each dissolved in the same quantity of water as before, be mixed without the myrrh, and thrown on the paper filter, nothing will pass through but clear water, and the protocarbonate will remain on it. This fact proves that the iron enters into a kind of combination with the myrrh: perhaps the affi-

* It is worth while to observe, that if carbonate of soda and myrrh be separately pulverized, and well triturated together, and if the powdered sulphate of iron be then added, and the whole well beaten, the mass will remain permanently black, and will continue soft for several days. But if the carbonate of soda be triturated with the sulphate of iron until they liquify, and if the powdered myrrh be then added, the mass produced will in a few hours become hard, and in a day or two will assume a light-brownish gray hue. The experiment presents another example of a principle, of which there are many instances, that in compounding medicine, the order of mixing the ingredients may render the formula effective or valueless.

nity which produces the combination retards the peroxidation of the iron ; and perhaps this example may induce us to suppose that, in the case of the ferruginous sugar, it is a similar affinity which renders the state of protoxide permanent, and not any deoxidating power in the sugar.

Thus these two formulæ, the iron pill and Griffith's Mixture, are much more scientific than their inventors intended or were aware of : but they are ridiculous on account of the small quantity of iron present. A person who swallows half an ounce of Griffith's Mixture three times a day, ventures on receiving into his stomach one-third of a grain of protoxide of iron at each dose ! And when a five-grain compound iron pill is taken, the quantity of protoxide of iron swallowed amounts to one-quarter of a grain !! Instead, therefore, of one scruple of protosulphate of iron in eight ounces of Griffith's Mixture, as at present, there should be at least three drachms, with three drachms and eleven grains of common sal sodæ. The quantity of protosulphate of iron and carbonate of soda might also be increased in the iron pill far beyond what is prescribed ; but then it would not be possible to form a mass. This pill, in its present state, is a bad formula, and as a chalybeate is worthless.

The process of the Pharmacopœia for this pill is at least singularly fortunate in the choice of ingredients ; the myrrh and protocarbonate enter into combination ; the myrrh, sugar, and treacle all tend to prevent oxidation ; and the order of mixing is such, that the mass is preserved in a soft state, much longer than it could be by any other order.

I have observed that decoction of sarsaparilla has the power of preventing the protocarbonate of iron (precipitated from protosulphate of iron by carbonate of soda) from absorbing oxygen from the atmosphere to the extent that it would have done, but for the presence of sarsaparilla. If each salt be dissolved in this decoction, and the two solutions mixed, the precipitate, when filtered off and dried, will be a dull, deep-brown, and by no means the lively colour of percarbonate of iron. The power

of sarsaparilla is, however, in this respect, much inferior to that of sugar.

The ferruginous sugar of MM. Becker and Klauer, although it contains the iron chiefly in the state of protoxide, does not appear fully to answer the purpose intended. In the first place, one-fourth of the iron is, according to Klauer, in the state of tritoxide; and, during the process, the cohesive force of the whole precipitate is so much increased, that it is very slowly and imperfectly soluble in weak acids, such as we must suppose it meets in the stomach. The precipitate, when first obtained in its soft, flocculent state, dissolves instantly, if a little distilled vinegar be poured on; but the ferruginous sugar remains long undissolved, when left in contact with that liquid. I digested one scruple of it with an ounce and a half of distilled vinegar for ten weeks, at the temperature of the atmosphere, without effecting a complete solution.

Attributing the difficult solubility of the protoxide of iron, in the ferruginous sugar, to the circumstance of its having been dried, I hoped to obviate that defect, by not permitting the preparation to become dry, but to preserve it in the form of a thick syrup. On making the experiment, I found that the oxide, although the chief part of it was kept chiefly at the minimum by the sugar, was scarcely more soluble than that which had been dried. The oxide, however, remains permanently suspended in the syrup, and the syrup has a strongly chalybeate taste.

The only method known to me, by which the iron can be exhibited in the state of protoxide, its solubility being preserved, is to administer it shortly after it has been precipitated, to protect it from contact of air, until it is administered, and to avoid subjecting it to any of those processes which have a tendency to increase its cohesion, as evaporating, boiling, or filtering.

As preparations of iron have a tendency to induce more or less constipation, it is rather serviceable, although not absolutely necessary, to combine them with a gentle aperient. A very small quantity of sulphate of magnesia may, therefore, be ad-

vantageously exhibited with a chalybeate. I find that calcined magnesia is a very convenient precipitant of protoxide of iron from sulphate of iron : for, as it is prudent to use a slight excess of the magnesia, that excess is neither disagreeable nor hurtful : and the magnesia, by combining with the sulphuric acid of the sulphate of iron, produces sulphate of magnesia, while protoxide of iron separates, and is then, and for some time after, easily soluble in weak acids. Thus every object is at once attained.

With regard to the quantity of these substances which may be employed, I can only state the results of a few trials made on myself, and another person, who on my assurance of the dose I used, took a similar one. I began with half a drachm of sulphate of iron, well triturated with five grains of calcined magnesia, and an ounce of water. I then took two scruples, with eight grains of magnesia, without observing any effect from the dose, except the blackening of the fæces, and this it did in an extraordinary degree. Fifty grains of sulphate of iron, with eight grains of magnesia, caused the discharge of the stomach.

A newly made draught of this kind contains the iron in such a state, that it will instantly dissolve, if distilled vinegar be mixed with it. If the phial, in which it is contained, be well stopped, as by capping the corks with moistened bladder, the solubility of the contents will be preserved for several days. The precipitate sometimes grows pasty in the bottle after resting some time, but if shaken, the whole becomes again liquid.

It remains to consider the formula best calculated to present the protoxide in a state fit for exhibition ; and the first step is to obtain a proper sulphate of iron.

Much of the sulphate of iron sold as pure, is prepared by re-crystallization from the sulphate of iron of commerce, obtained from iron pyrites. Precautions may not have been used for removing the copper ; mere re-crystallization will not do it. Hence, such sulphate is totally unfit for the purpose, as by daily use of it, a deleterious quantity of carbonate of copper would, at length, have passed through the patient. Neither will sulphate

of iron, ever so pure, which has assumed a green colour, answer the purpose; for this, by decomposition, will afford a deep green precipitate, less soluble in weak menstrua, than is desirable. The sulphate of iron in crystals must be azure, or beryl-blue. Such will be best prepared according to the process of Berthelot, which is as follows:—

Dissolve sulphate of iron, free from copper, in water sharpened with sulphuric acid, and crystallize it. Of this salt, take 500 parts; throw it in separate quantities into 550 parts of distilled water, kept boiling. When it is dissolved, add eight parts of turnings of pure iron, and in a few moments, while the solution is still boiling, filter it through paper previously well soaked in water. The liquor, as it runs through, is to be received in a vessel containing a mixture of 375 parts of alcohol at 36°, and 8 of sulphuric acid, continually agitating the vessel. The protosulphate of iron instantly precipitates, in the state of a blueish-white crystalline powder. When cold, the alcoholic liquor is to be poured off, and the salt dried on bibulous paper.* This protosulphate contains its water of crystallization, just as if it had been obtained from a watery solution.

The next step towards obtaining a proper formula, is to determine the quantities of calcined magnesia necessary for the decomposition of a given weight of protosulphate of iron.

One drachm of sulphate of iron, is composed of

Sulphuric acid . .	17.26 grains.
Protoxide of iron .	15.54 „
Water , .	27.20 „

60.

The quantity of pure calcined magnesia necessary to neutralize the sulphuric acid in one drachm of sulphate of iron, would be 8.63 grains: but it would be better to use 10 grains. By union with the necessary quantity of water, 27.18 grains, the

* *Journal de Pharmacie*, Avril, 1839, p. 208.

result would be the formation of 43 grains of epsom salt, and the elimination of $15\frac{1}{2}$ grains of protoxide of iron.

Having thus determined the proper quantity of the ingredients, we come to the formula :—

R Sulphatis Ferri *cærulei* Pulveris Subtillissimi, semunciam.

Magnesiæ Calcinatæ, scrupula duo.

Aquæ, uncias sex.

Tincturæ Quassiæ, 3 ii.

Magnesiam tere cum aquæ pauxillo, et permistis quod reliquum est adde : postea adjice sulphas et tincturam : iterum paulisper tere, et quamprimum in phialas sex divide, probe et protinus obturandas. Sumatur unus mane nocteque.

This dose is to be considered average ; for delicate stomachs, the quantities may be a little less.

The mouths of the phials should be tied over with moist bladder, or dipped in melted wax. In this way, the protoxide of iron will remain in its soluble state for two or three days ; and it is in possession of its maximum power. Each draught will contain ten grains and one-third of protoxide of iron, and twenty-eight grains and two-thirds of sulphate of magnesia ; and each day will be taken about a scruple of the former, and nearly one drachm of the latter, which would act as a very gentle aperient, and obviate the constipation which the protoxide might otherwise occasion. The taste of the draught, otherwise disagreeable, is rendered merely bitter, but the iron is not blackened, or otherwise acted upon by the tincture of quassia.

It may be said, that this protoxide, by solution in acids found in the stomach, will once more form a ferruginous salt, perhaps as active, or even as deleterious as the original sulphate. The supposition, however, is contradicted by the fact, that the forty-grain doses in my trial, in no case produced any unpleasant effects. This is true, but I do not attempt to explain it : the aid of hypothesis would be necessary for an explanation. The *modus operandi* supposed by Dr. Becker, the proposer of the saccharated protoxide, is, that it is “*facilement absorbé par*

les sucs animaux." The only means in our power, of testing the solubility of the protoxide in the stomach, is to prove that it easily dissolves in weak acids out of the stomach.

Next to the above draught, I conceive that the *pilules ferrugineux du Docteur Vallet*, are the next best formula, and preferable to the *sucre ferrugineux* of Becker and Klauer. I could assign my reasons for this preference, but it is rendered unnecessary, by the Report made to the Royal Academy of Medicine, by MM. Soubeiran, Planche, et Martin-Solon. It may be proper to explain, that the *sucre ferrugineux* is the same preparation as that which has been prescribed by some practitioners in Dublin, under the name of *protocarbonas ferri saccharisatus*.

BIBLIOGRAPHIC NOTICES.

The Arcana of Nature revealed: or, Proofs of the Being and Attributes of God, elicited in a brief Survey of the Works of Creation. By THOMAS KERNS, M.D., M.R.C.S.L.

THESE two volumes have afforded us infinite pleasure in their perusal. They are clearly and intelligibly written, and adapted, alike, to the medical as to the general reader. We should rejoice to see the strong religious spirit, which, free from the alloy of hypocritical cant, adorns every chapter they contain, diffused more widely, every day, through the atmosphere of our Profession, and now and then condensed by an electric spark from the mind of such a writer as Mr. Kerns, into a tangible form like the present.

The double value contained in this work is, that it leads the medical reader to the consideration of those subjects, which are but too often neglected or slightly regarded in the multiplicity of necessary engagements which occupy his time; and to the general reader it gives a vast quantity of scientific information in a very condensed form, in almost all the departments of nature—the objects of the work; the end being, the proofs thence derivable of the existence of a benevolent Creator.

A great deal has been written in this subject, much obscurely by former writers, and the arguments in general used have swelled and accumulated into philological dissertations, in which the mind becomes bewildered from the very quantity of matter. This fault has been avoided in the present work, in which the opinions of the best authors are stated and collated; and, except when some natural facts appear to contradict biblical tradition, nothing which can, with propriety, be called dogmatism, is to be found. In all such instances the author has laboured, and we do not think he has laboured in vain, to throw the weight of evidence on the scriptural side of the question, except one, viz. that in which he expresses his concurrence with the opinions of geologists, in regard to the antiquity of the earth being greater

than that transmitted to us in the Mosaic record. This controversy, in our opinion, turns almost entirely on the meaning which may be attributed to the Hebrew word *bara* (ברא) created; i. e., whether created means made from nothing, as appears from the best lexicons, or whether it may not be a figurative expression, for bringing into existence, as a whole, what previously existed in its elements. The beginning mentioned by the Mosaic record not only does not necessarily form part of the first day, but it would require a straining of the passage to include it; and our author has suggested, that the first and second verses may be considered as an introduction to the commencement of our terrestrial economy, the details of which commence with "the Spirit of God walking on the face of the waters," whilst the period remains undetermined till the commencement of the first day, by the voice of the Eternal proclaiming "Let there be light."

In a note in the Appendix to the first volume, Dr. K. states that

"He is disposed to consider the word *create*" as sufficiently strong to express formation primarily from nothing; if it did express something more than formation out of pre-existent matter, we cannot see why it could not be used in reference to man. When it is said that God created man, who was formed out of the dust, it is strictly correct in this view, because he has previously *created* the matter. If God had not created the dust at some period from nothing, then he could see the same impropriety in using the word *create* with reference to God as to man; but he admits that from the words *created* and *made* being used alternately and synonymously with reference to God, it is evident that the word *create* does not necessarily imply that the thing spoken of was then formed out of nothing."

We shall not enter farther into this discussion, but leaving it and such like to our non-medical contemporaries, give a hurried sketch of the contents of this work.

Commencing with a Proem, shewing the limitations which are to be set to the light of nature, and the grandeur and sublimity of the contemplation of God, the author classifies all mankind under the heads of Theists, Antitheists, and Atheists, and refutes the doctrines of the atheist by conclusions from his own premises. The powers of the human mind are then referred to, and the former, present, and future existence of God demonstrated.

In the first, second, and third chapters, the antiquity of the earth is discussed, the opinions of ancient philosophers given, with the theories of a first formation, and an attempt is made to

reconcile geological phenomena with the Mosaic record. In treating of some of the astronomical phenomena, our author becomes quite sublime, and though his language is simple it is beautifully adapted to his subject.

In the fourth, fifth, and sixth, the formations of mountains, valleys, lakes, rivers, and seas are treated of, together with atmospheric phenomena, electricity, the aurora, ignis fatuus, &c., currents, trade winds, hurricanes, climates, seasons. The distribution of animals and vegetables over the globe, and the means of their diffusion; distribution of man, the *questio vexata* of whether the different races of mankind sprung from the one pair; a question decided by our author in the affirmative.

In the seventh chapter, the laws of nature are examined: gravitation, vegetable and animal organization, &c.

In the eighth, the natural history of inorganic bodies, formation of the earth, mountains, volcanoes, plains, arrangement of the solid parts of the globe.

The ninth, tenth, and eleventh chapters treat on the aqueous portions of the globe, meteorology, and the structure and vitality of vegetables; and the volume concludes with general remarks on science and on the institutes of nature, in connexion with it, evincing the prospective care of a benevolent Creator.

The second volume contains good and clear views of animal physiology, with so much of general and human anatomy as to elucidate the subject in a very distinct manner. We like particularly the chapters on Respiration, Digestion and the Senses.

The origin of evil and the manifest agency of a great and benevolent Providence, are ably treated of in the concluding chapters; and the work taken as a whole is calculated to leave most useful and gratifying impressions upon the mind.

S. L. L. B.

The Principles and Practice of Medicine, founded on the most extensive Experience in Public Hospitals and Private Practice, and developed in a Course of Lectures delivered at University College, London. By JOHN ELLIOTSON, M.D., F.R.S., &c.; with Notes and Illustrations by N. ROGERS, M.D. London: JOSEPH BUTLER: 8vo. pp. 1088.

It cannot be expected that we should enter into a critical examination of all the opinions, principles, and rules of practice laid down in this volume, embracing as it does the whole circle

of affections which usually fall under the province of the physician. It will suffice to give a sketch of the plan and main features of the book, with a few specimens of the manner in which the various subjects are handled, and some passing comments and concluding remarks.

The first thing demanding our notice is a preliminary article on the means by which the art of medicine is to be perfected: these our author considers as threefold; to be accomplished, first, by accessions to our knowledge of the nature of diseases, through the medium of morbid anatomy and physiology; secondly, by improvements in diagnosis; and lastly, by improvements in our acquaintance with remedies and their application. The importance of the first-mentioned can scarcely be overrated, involving as it does to a great extent the two following; and in this every one must acknowledge, that giant strides have been made during the last few years; while the discoveries in the phenomena of thoracic diseases have poured a lustre upon diagnosis, which is enabling us to see distinctly where we formerly groped in darkness. On the third means of improvement, the advancement of therapeutics, our author thus delivers his sentiments:

“ With respect to the third mode, by which I conceive that our art must be perfected, (improvements in our knowledge of remedies and their application,) I must be brief. Much remains to be accomplished in the discovery, both of the virtues of medicines already in use, or such modifications of old ones, as almost entitle them to the epithet ‘new.’ Every advance in our knowledge of the essential nature of diseases, will no doubt enable us to improve our application of remedies upon general principles; to improve our ‘general indications.’ But without any additional knowledge of the nature of diseases, cautious trials, guided by the best analogy, we may discern, or some fortuitous occurrence will enable us (if we are disposed to labour) to effect much in extending our knowledge of the powers of particular remedies over particular diseases. Lord Bacon regrets that physicians apply themselves so exclusively to general indications, neglecting the peculiar properties of remedies in particular diseases. Such experimental facts, however insulated they may at first appear, gradually arrange themselves into general principles; and thus, what is at first little better than empiricism, becomes science. I confess that I look with more hope to this source of improvement than to any other.”—p. 20.

We also confess to the heresy of entertaining sanguine expectations that much remains to be accomplished in the discovery of new and more efficient weapons wherewith to combat disease. We have been too long content with the possession of those which have come down to us from our forefathers. It is astonishing, how few additions have been made to the number

of important remedies in the course of centuries. True it is we have learned to employ those already known with more certainty and effect, and are beginning to understand when they are beneficial and when inert or injurious. But why should we despair of finding those agents which shall have the like specific influence over diseases now reckoned the *opprobria medicorum*, as bark possesses in agues, mercury in syphilis, colchicum in gout, &c. ? Is the treasury of Nature exhausted, and has she not more secrets to reveal ? Coleridge, whose sagacious mind explored almost every nook in science, observes, "The study of specific medicines is too much disregarded now. No doubt the hunting after specifics is a mark of ignorance and weakness in medicine, yet the neglect of them is proof also of immaturity ; for in fact, all medicines will be found specific in the perfection of science."—(*Table Talk*, vol. i.)

We now pass on to the Introductory Observations, which embrace those topics usually contained in a preliminary lecture, and are elucidated very copiously and perspicuously. The terms employed in speaking of the characteristics, modifications, causes, termination, and treatment of diseases, are explained with such accuracy and minuteness of detail, that the student can hardly fail to understand their meaning. Towards the close the learned Professor takes up the subject of the methodical arrangement of diseases ; and having adverted to the principal methodical nosologies, expresses his own sentiments thereon and propounds the method he has resolved to adopt :

"Now, however useful it may be to arrange diseases slightly, for the purpose of memory, and for the purpose of general views, I think it must be confessed, that all these various *methodical nosologies* only perplex and encumber the mind. I studied the arrangement of Dr. Cullen formerly very minutely, and had great part of him at my fingers' ends ; but I confess that my knowledge of it now is but of a very superficial kind, and that it was never of any use to me. The arrangements of Drs. Young and Good appear to me just as useless ; and I would not, if I were to advise you honestly, and I hope I shall always do so, I would not advise you to plague yourselves about nosological arrangements. My own experience tells me that it is a much greater plague to recollect the arrangement, and all the hard words, than to recollect the things for which the arrangement is made. I never found it of the slightest use ; any more than the barbarous jargon of the *propria quæ maribus*, and *quæ genus*, of the Latin grammar."

"The most natural mode, in my opinion, in which we can attempt to arrange diseases in our mind,—that which serves best for the purposes of recollection (for an arrangement is certainly useful ; although I am not an advocate for a *methodical* one, so called) is a two-fold

arrangement; first, as to the nature of affections in general,—whether they are inflammatory, structural, functional, mechanical, or parasitical (for whenever we see a case, we immediately consider what is the kind of affection); and then, secondly, as to the part in which the affection occurs. This is the arrangement which I shall follow. I shall first consider general diseases,—such as affect every or most parts of the body;—inflammation, scrofula, and various other organic diseases; and afterwards, having considered all the affections which may attack any part of the body, I shall proceed to consider those affections and all others, whether functional, mechanical, or parasitical, as they attack the body from the head downwards—*a capite ad calcem*. I think we all make two inquiries in considering any case;—the one is the nature of the disease, and the other is the situation of it. This is the utmost assistance, I think, that the memory can have from arrangement; and this is the plan which is continually followed by practical writers. They write on particular diseases, whatever they may be—inflammation, cancer, &c.; and of the whole diseases of particular organs, and sometimes of particular regions. You have one writer publishing a work especially on diseases of the urinary organs; another, entirely on diseases of the nervous system; another entirely on diseases of the head; another, on diseases of the chest; and this course we naturally fall into. But, independently of that, we must make observations upon the general affections to which all parts of the body are liable.”—(pp. 58, 59.)

Not to enter into the subject of nosological arrangements in general, or the merits of the plan here advocated, we must just observe, that Dr. Elliotson has truly proved himself an enemy to all strict arrangements by not adhering to his own; for, it is obvious, that instead of considering diseases, first as regards their nature, whether inflammatory, structural, functional, &c., and secondly, as to the particular part they affect; he has treated of them, first, as universal or general, and then as special or local.

The first thing that claims our attention is inflammation, which occupies the next eighty pages,—a space certainly not greater than its importance demands. We scarcely remember to have seen it examined so amply in all its bearings, except in distinct treatises; though interspersed with some speculative opinions, it teems with practical information of the highest value: we should like to enter upon it, but our limits forbid. We have next, the frequent sequelæ of inflammation,—hæmorrhage, the profluvia and dropsy, followed by succinct accounts of changes of structure,—hypertrophy, scirrhus, tubercles, cancer, &c., and then our author proceeds to consider universal diseases,—anæmia, chlorosis, and scurvy.

Anæmia he considers as arising from a defective formation of blood: he points out the symptoms as closely resembling

those of chlorosis;—refers to the cases which have occurred in France, as having the character of an endemic, generated by some noxious gas;—and concludes, that iron conjoined with other tonics and good food, is the best remedy, while mercury has proved very hurtful.

Passing over the next subject, Scurvy, which is, however, not less deserving of perusal, we come to the important topic “Fever.” Our author’s views as to the seat of these affections, are quite orthodox; he is speaking of the propriety of classing them among universal diseases.

“Again, there is another set of diseases which may themselves be local; but which produce effects so universal, that if they have really a local seat, it is at one spot in one patient, and at another spot in another patient. I refer to fever; and, indeed, I may say *fevers*; for there are various kinds of what is called *fever*;—to say nothing of eruptive diseases. Many persons speak of fever (be it intermittent, remittent, or continued) as having a particular locality; but I do not think they have proved the correctness of their assertions; and according to our present state of knowledge,—though ready, of course, to change my views, when more knowledge is imparted to us,—I shall prefer considering these also as universal diseases.”—p. 194.

With regard to continued fever, Dr. E. has not followed the Cullenian method of dividing it into three distinct genera. He coincides with many of his brethren in thinking that there is but one simple continued fever,—that the several forms of it are so many varieties, uniform in origin and character, but widely differing in intensity. He observes:

“If the symptoms be purely inflammatory, purely those of excitement, with good strength at first, and do not afterwards degenerate into debility, or at least not into *considerable* debility, the disease is called *synocha*. If they degenerate into great debility, it is called *synchus*. If, from the very first, great symptoms of debility appear, it has been called *typhus*. These are arbitrary names; the two first having the same etymology; but they do very well to express different characters of the same disease, in different individuals. When it is called *typhus*, it is the same fever as many authors write of under the name *ship-fever*, *hospital-fever*, *gaol-fever*, *putrid-fever*, or *adynamic* fever. If the symptoms be very severe indeed, then it is called ‘*typhus gravior*’; but if they be mild, though it even prove fatal, it is then called ‘*typhus mitior*’; typhus being divided into two varieties. There is every variety in continued fever; both as to the degree of excitement and the degree of strength; from the very highest excitement, and a high degree of strength, down to the most absolute prostration that can be present; and from no putrescency up to a high degree of it.”—p. 266.

We are rather surprised to find Dr. Elliotson state that he has never seen typhus contagious; however, he somewhat modifies this statement subsequently, and thus expresses himself:

"It is allowed by those who contend for its contagiousness, that the contagion is one which is most easily dissipated by ventilation. In the next place, it is allowed by them, that if a person be in good health, and with every means of health in full play, he will generally escape; and if it be a fact that the disease is sometimes contagious, and sometimes not, and sometimes arises *de novo*, then we see another reason why some people have denied the contagion of the disease altogether. However, I am quite sure that much of the difference of opinion, on this subject, must have arisen from this circumstance, that many diseases have been called typhus, which were no such thing. There can be no doubt that many of the cases of continued fever which we see, are really cases of *remittent fever*, dependant upon malaria; having nothing at all to do with contagion. We every day see cases of remittent fever mistaken for typhus, but easily distinguished from it by nice observers; and persons may be exposed to such cases without suffering the disease; and, therefore, typhus is continually said not to be contagious."—p. 286.

Our author does not seem disposed to think, that putrefying animal matter will of itself give rise to typhus, though it may, and does obviously, act as a predisposing cause. It should be remembered, however, that Magendie and Gaspard caused all the symptoms of typhus, by injecting putrid matter into the veins of animals.

"It is therefore certain, I think, that mere confinement, mere exposure to the emanations from persons crowded together amidst the greatest filth, will not in itself produce fever. I think it is quite certain that animal matter, in the greatest state of putrefaction, does not of itself afford anything which will produce a disease called contagious. It may be that the persons so exposed are fed well, and are in good spirits, and have all other means of contributing to health at their command. Still, however, if any matter which is in a state of putrefaction; as is, or was formerly, the case in dissecting rooms; as occurs in ammonia-manufactories, and manufactories and places where putrid blood is used, and from which there are horrid emanations; if this alone could produce contagious diseases, we should have fever every day, where we have nothing but perfect health. There can be no doubt, if these things throw a person out of health, then any contagion, or any other cause of fever, will act intensely in producing this disease. This is allowed with regard to cholera. Nobody believes that any putrid emanations, or any thing that proceeds from persons crowded together, or the putrefaction of animal matter, will produce that disease; but all know that these things have a tendency to throw people out of health; and by the body being thus brought into an un-

natural state, it is rendered an easy prey to any other causes that are applied."—p. 299.

Neither does he say much of malaria as a generating cause, so that we are left quite as much in the dark as ever, for solving the question—"what is the factor of the specific virus, which we call typhoid poison?" It seems too subtle for the cognizance of our senses. Is it possible that *malaria*, which is allowed to be the remote cause of intermittents, may, by a modification of its chemical constituents, or by combination with the effluvia of putrifying animal matter, generate continued fever? There is something feasible in the following hypothesis :

"I ought to mention that the bodies of persons dead of typhus, rarely (if indeed ever) give the disease ; and that typhus, like other epidemics, whether contagious or not, grows milder and milder the longer it lasts ; although it be spreading more and more. I may just mention, by the way, that besides *malaria* being a cause of *remittent* and *intermittent* fever ; and besides *contagion* being a cause of *continued* fever, it is very possible there are certain other exhalations, which do harm ;—which produce actual disease, I mean. Sydenham had an idea, that epidemics arose from some peculiar changes in the bowels of the earth. It was only a fancy of his ; but it is very possible that some of these peculiar causes of disease, are exhalations let loose from particular spots. Berzelius mentions a curious circumstance. He was making experiments with seleniuretted hydrogen ; and after a certain period (not immediately) catarrh came on, and continued a very great length of time. A quantity which he inhaled, while making the experiment, did not produce any great irritation at first ;—he did not suffer any *immediate* inconvenience ; but after a certain period had elapsed, then it began to operate, as all specific poisons do ; and he had long continued catarrh. Now some, from such facts as these, conceive that a volcano may let loose a substance capable of producing a peculiar operation on the human body. It is not altogether improbable that exhalations of various sorts, may arise out of the earth, independently of the exhalations of diseased animal bodies, and independently of the exhalations from the *surface* of the earth, of putrifying vegetable matter. The subject is not at all understood ; but it is certainly an inquiry worthy of being attended to, whenever an opportunity occurs."—p. 304.

With respect to the advocates of inflammation, Dr. Elliotson observes :

"Some will say that it is a universal inflammatory state ; while others contend that it is only a *local* inflammatory state ; and some maintain that this local inflammatory state is situated in one part, and some in another. But there certainly is something more than all this in fever. You have a peculiar look of the countenance ; generally

pains, at the first, in the loins ; a tremulous tongue, and a universal disturbance such as you will not have from any simple local inflammation in any one part. You will frequently have violent fever, and although there is local inflammation present, yet the latter is not at all in proportion to the former. As in small-pox, you will sometimes have the patient die before any inflammation becomes visible ; death taking place merely from the depressed state of the system. Mere inflammation, whether local or general, is *one* fact in the disease, but not the whole of the facts, nor is it a fact from which any one can prove that the other set of symptoms arises."

" With respect to those who consider that it is neither situated in the fluids nor the solids generally, but in some one part of the body, I may mention that Hoffmann thought it was a disease of the nervous system. The nervous system certainly is affected, and so likewise are the secretory organs ; and therefore others have just as much right to say that it is a disease of the secreting system, as Hoffmann had to ascribe it to the nervous system. Dr. Wilson Philip supposes it to be an affection of the capillaries throughout the body ; but then there is a peculiar affection of the nervous system in general ; and there is particularly a disturbance of the abdominal organs. Some have fixed upon inflammation of the brain. Former writers have done that : and a modern physician, in London, (Clutterbuck,) has done the same ; he considers it a mere inflammation of the brain. Others, again, residing in Paris at this moment, fix upon the abdomen. Broussais, for instance, considers it to be inflammation of the stomach and bowels ; — what he calls *gastro-enteritis*. Some patronize one organ, some another.

" Now I believe, as I just now mentioned, that the head is frequently in a state of inflammation, and so is the abdomen ; but occasionally the head is far more affected than the abdomen ; and in other cases the abdomen is more affected than the head."—p. 304.

Our author had already given the symptomatology of typhus, differing, as it does, in degree according as the 'virus' acts on the three great nervous centres. This we need not particularize ; merely observing, that the varied symptoms are delineated with much skill and minuteness, and with graphic fidelity.

The morbid appearances are well described, but want of space prevents our inserting Dr. Elliotson's account of them.

Treatment :—" This," says the learned Professor, " notwithstanding our uncertainty as to the causes, &c., is, in the highest degree rational, and in the highest degree successful. In the first place the utmost cleanliness ; free ventilation ; light clothing ; frequent change of linen ; the free use of the chlorides ; cold affusion, (as recommended by Dr. Currie,) provided there be no pulmonary affection, no general profuse sweating or chilliness. As to temperature, the patient's feelings should always be consulted. Frequently as the disease

advances, there is not the same power of generating heat, and you find it advisable to use *tepid* ablution, where previously you used *cold*.

"While you thus attend to the surface of the body, you likewise have to attend to the inner surface;—to the alimentary canal. It is a good practice, in the beginning, to give an emetic; but if you find tenderness of the epigastrium, if you find tenderness on making pressure on any part of the abdomen, I would not have recourse to any such measure. If, indeed, there should be a violent determination of blood to the head, I do not know that I should have recourse to it then. Frequently, however, in the beginning of fever, it is an excellent practice to give an emetic;—for instance, a grain of tartar emetic, with a scruple of ipecacuanha; but I should never think of giving it, without first ascertaining whether the abdomen was tender on pressure or not. Sydenham gives very good advice on this point. He advises us to premise bleeding, before we exhibit the emetic. This practice is not always necessary; but if the pulse were full, and there were great signs of a determination of blood to the head, I would bleed first. But whether we give emetics or not, there is no doubt of the propriety, in every case of fever, of seeing that the bowels are regularly opened;—that no filth collects in them, any more than on the surface. They should be freely opened, for the most part, every day; at least at the *beginning* of fever. If they be confined, one of the best things is a large dose of calomel. The quantity must vary from two to five, ten, fifteen or twenty grains, according to circumstances; but for the most part, five grains of calomel, followed by castor-oil every two hours, will answer every purpose. Now and then you will have obstinate constipation. A patient may not have had a good stool for many days; and then you may give ten grains or a scruple of calomel, and follow it up by castor-oil; but it would be wrong to give a dose of that description if there were every probability that a few grains would answer the purpose. Nothing is better than to follow it up with castor-oil; but at the same time, I need not say you are likely to accelerate its operation, by giving a common injection. This, however, is not to be done if the bowels be sufficiently open of themselves;—if they be open once a day. Sometimes it will happen that they are *too* open;—that there is the *opposite* state, that of excitement; and then, of course, purgatives would be highly improper. The purgative plan, when necessary, is of course to be put in practice at the *onset*; but, in regard to ablution, I have stated that I would continue it during the *progress* of the disease. Calomel certainly does clear out the disease better than anything else; although it usually requires another purgative to set it off. But although you clear out the bowels well in the first instance, by means of calomel, you nevertheless often find it a good practice to go on with smaller doses of that medicine, or other preparations of mercury during the course of the disease. If the stomach or intestines be irritable, we ought not to do more than give an injection.

"The use of purgatives in fever is very great, but undoubtedly it has

been exaggerated by some writers. You will find, if you consult some books, that you have only to turn the patient inside out, in order to cure him ; but I am quite certain such is not the case. Within the last two or three years there has been found a great disposition to diarrhoea, which it has been absolutely necessary to restrain. Costiveness ought never to be allowed, for it causes the tongue to be brown and dry ; and except in the last stage of fever, when there is frightful debility, you ought to have one stool in twenty-four hours."—p. 309.

Our author then adverts to venesection, respecting which he says :

" Venesection is not required for mere generally increased action. However, if you know that the epidemic is of such a character that inflammation is sure to come on, it is as well to bleed in the arm to prevent such inflammation from being so violent as it otherwise would. But as a general rule in the fevers that I see in London, venesection is not demanded in one case out of thirty or forty. In the country, where people are strong and plethoric, and in hot countries where the excitement is sometimes exceedingly great, the congestion within the head, chest, or abdomen very considerable, the lancet is the 'sheet anchor;' whereas, in the majority of continued fevers which I see, venesection is certainly not necessary ; and I am sure that those who employ it extensively in this disease, if they do not destroy their patients, yet protract their cases. However, you will find it of great importance to employ *local* bleeding ; and, except in hot countries, I think every good may be obtained from it, in the majority of cases, without that shock which *general* bleeding produces ; and which is very desirable in mere inflammation. In *fever*, this shock is not demanded. In comparatively *mild* fevers, it would make the disease severe ; and in those of an asthenic character it would knock the patient down."—p. 310.

It ought to be observed, that where venesection is proper the sooner it is practised the better ; but the greatest judgment and caution are required, as to when it is admissible, and how far it should be carried. In cases of pure typhus it cannot be too much deprecated ; and even sometimes in other instances it is to be feared that it may not only so depress the system as to prevent its rallying at the last, but directly facilitate the absorption of the virus by the circulatory torrent. When the brain is much affected, the best effects are often obtained from the *cold dash*.

Let us proceed, however, with our text :

" It is necessary, in every case of fever, to be constantly on the look out for local inflammation ; every day to ascertain what is the state of the head, the chest, and the abdomen. You should always ask if the patient complains of headach. You should look at his

eyes, and see whether they are red or not. Ascertain if his pulse is full; and inquire whether there is any throbbing of the head. So, with respect to the chest, you should observe whether there is difficulty of breathing; and if there be, it is well to apply the stethoscope, and ascertain what rattling there is. The abdomen ought to be carefully felt every day; to see whether the stomach, intestines, liver, peritoneum, or other parts, be inflamed. When we find a sufficient degree of inflammatory disturbance of these parts, then it is right to take away blood locally. If the head be affected, then you should cup at the back of that organ; or apply leeches to the forehead, temples, or behind the ears; but if it be the abdomen which is affected, it is always better to employ leeches. If the pain be situated at the front of the head, it is better to employ leeches there. I mentioned, when speaking of inflammation, that the effect of leeches or cupping is often very local. I have seen parts, where they were applied, relieved; while others, in the neighbourhood, remained as painful as before. At whatever part of the head the pain is felt, there you should direct your means of treatment. If there be delirium, and this delirium be accompanied by pain and heat of the head, or throbbing; or if the eyes be red; or if there be great vivacity, like intelligent delirium of an active kind; you ought always to shave the head, then apply a cold wash, or employ a bladder of ice (which is one of the best things), and put plenty of leeches on, or employ cupping at the occiput. If there be vomiting, or tenderness at the epigastrium without it, you should apply leeches, which are the best remedy for it; for, when there is tenderness or vomiting, it generally arises from inflammation of the mucous membrane; and leeches will remove it, by removing the causes of inflammation. So, with regard to the abdomen at large, when that is tender, there is generally more or less diarrhoea; the intestines are acting too violently; and leeches freely applied are the best mode of restraining it."—p. 311.

He again reverts to the mercurial plan of treatment as an auxiliary to the foregoing means.

"By degrees it causes the tongue and the interior of the mouth to become moist; and when that is affected, the patient is almost sure to be better. Over and over again, in treating patients, I have omitted the mercury, and have seen the tongue grow darker and fouler; and then upon having recourse to it again, the mouth has resumed its moisture, and the tongue has become less foul. The moment the mouth becomes moist, provided proper detraction of blood be instituted, and all other suitable means, the local symptoms of inflammation generally decline; and patients recover more quickly than they otherwise would; and many recover who, in all probability, would not, unless that practice were resorted to. Still, I must again repeat, that a great number of cases of fever will do well without it; but where the symptoms are severe, you will find it a most useful me-

dicine. You should not aim at any violent affection of the mouth; and if that should occur, the medicine must be omitted till the symptoms remit; but you should feel the patient's gums every day to ascertain whether the mercurial effect is kept up.

"You will find, however, that calomel is frequently too active for the intestines; and blue pill, or hydrargyrum cum cretâ, answers better. After a time, even these will purge; so that it is necessary along with them to exhibit chalk mixture, or an infusion of catechu. It is well to give the infusion of catechu or kino, for it will enable the patient to bear the mercury; and you frequently find that hydrargyrum cum cretâ is the only mercurial preparation that can be borne. Mercury, if pushed too far, increases the mischief; it induces great irritation of the alimentary canal. Every good remedy of course requires to be properly used. Small doses of opium, I need not say, will tend to check the diarrhœa; and frequently there can be no objection to five drops of the tincture, three or four times a day.

"As to antimony, I do not think it an appropriate medicine; for it irritates the stomach; a circumstance which you do not want in fever. There is so frequently also a disposition to sickness, that it is very likely to excite vomiting. If you give mercury at the same time, the antimony has a great tendency to counteract its effect.

"In cases of decided inflammation it would be a good remedy, pushed to a large quantity; but when the case is attended with great irritation of the alimentary canal, (as many attacks of fever are,) and the patient has but little strength, I am sure that it is better not to give antimony; lest you make the patient's stomach so irritable, that it will not bear food, or anything else. As to its sudorific effects, I have given antimonial wine in very large doses, without producing sweating. The best mode to ensure sweating in fever, is to clear out the bowels, to reduce the temperature of the surface, and to take away blood locally or generally, according as may be required."—p. 313.

"Cool drinks are of course proper, and may be given copiously. It is to be remembered, however, that all acids, and even a saline draught, have a tendency to increase any irritation that may be present in the bowels."

Suppose, however, that the disease does not run on in this mild form, or that the inflammation does not become subdued, but that signs of great debility come on, we must then have recourse, even in the midst of fever, to good support:—

"Milk should be given, in as great abundance as the patient can take it, and, I think, strong beef-tea. Some imagine that the digestive process being suspended in fever, animal broths cannot be digested; but, however that may be, I know that persons who take strong beef-tea, frequently do admirably well. By 'strong beef-tea,' I mean a pound of meat, chopped extremely small, and boiled in a

quart of water, until the latter is reduced to a pint. Some persons will take two or three pints of it in a day; while some require only one pint;—and you find them considerably nourished by it. Many persons cannot take milk; but where it can be borne, it is excellent nourishment. I need not say that arrow-root, sago, and rice, may be taken with the milk. I believe that, occasionally, you will find that you must give more nourishment than you can get down by the mouth; and when there is extreme prostration, it is useful to give strong clysters of beef-tea, in which an egg may be diffused. I have seen them given to a patient every four hours, apparently with the result of getting him through the disease. If the clysters be discharged again, and not retained sufficiently long to be beneficial, you will find it useful to put into each of the injections a drachm, or two drachms, of powdered catechu.

“More than all this, however, is sometimes required; and we must give a patient wine. If you give wine as a *general* remedy for fever, I am certain that you will kill one half your patients; but if you give it in the latter stages of the affection, or if, from the first, the disease be attended with great debility, you will frequently do much good by its exhibition. It is often indispensably necessary, but not, so far as I have seen, at the *beginning* of fever. A great number of cases do well without it altogether; but I have seen cases, over and over again, where a glass or two of wine has stopped vomiting or diarrhoea. It is where there is extreme debility,—where there is *irritation* rather than *inflammation*; and where you find that the pulse is feeble,—almost fluttering; and, by the look of the patient, you see that he is sinking;—it is here that I have found it beneficial. I have always been accustomed to quote Sir John Pringle on the exhibition of wine; because I think that his directions, both as to the quantity required, and the time at which it is to be given, are the best which have been written. He says, ‘In our malignant fever,’ (he was physician to the army,) ‘when the pulse sunk, it always became very frequent’ (that is generally observed); ‘and in proportion as it rose with the wine, it turned slower. I have also had experience of the good effects of wine when the tongue has been both foul and dry.’ Here is an illustration of the propriety of not attending to one symptom, but to the whole. A dry and foul tongue frequently indicates inflammation; but if you find no inflammation present—on the contrary, great prostration of strength, with a fluttering pulse, an anxious countenance, and inability of the patient to move himself, then you need not fear foulness and dryness of the tongue, but may exhibit wine. ‘When wine is given,’ Sir John Pringle says, ‘in proportion as the patient grows stronger, the pulse becomes slower. Wine, in health, will *accelerate* the pulse; but when a person is weak, and the pulse is quick in proportion to the weakness, and when this state does not arise from inflammation, but downright exhaustion, wine, instead of *quickening* the pulse, makes it *slower*. The surest indication for wine,’ continues Sir J. Pringle, ‘is taken from the long continuance of the disease; the langour,

and dejection of strength, and the slowness and faintness of the voice ; but we can never be absolutely certain of its effects till we try it.' This is also a point carefully to be attended to. You constantly meet with cases, where you are in doubt as to the proper mode of treatment to be adopted. This occurs to me every day, and will occur as long as I live. You are not certain whether the time has arrived at which you are to treat the case as inflammatory or not ; and one is often made unhappy by this circumstance. Whenever a suspicion of this sort arises, it is best to combine both modes of treatment ;—to lessen any excitement, and to begin stimulating and tonic remedies, with great caution. Whichever you find do good you must increase ; and, in fact, substitute it for the other plan. 'I have seen,' Sir John Pringle says, 'in cases of this kind, strange instances of the power of instinct ; for when the wine was to do good, the sick swallowed it greedily, and asked for more ; but when it was to heat them, or raise the delirium, they shewed an indifference, or even an aversion to it.' It is of the greatest importance in fever to attend to the wishes of the patient, provided he be not delirious ; for then he will talk at random. But if he be not delirious, or only partially so—if he be sufficiently collected to know his own feelings, and to give a clear account of those feelings, they should, in general, be attended to. 'Sometimes,' he then continues, 'the physician can have no better measure for the quantity requisite than the appetite of his patient.'

"Half a pint of wine is sometimes required in twenty-four hours—one glass being given at a time. Generally a pint is the utmost that is requisite ; though I have given a bottle with advantage. It is best not to give Rhenish wines, or thin claret, or any acidulated wine ; for, if diarrhœa be present, it will increase the irritation of the alimentary canal. It is also best not to give sweet wines, for they are apt to ferment, and become acid in the stomach. Sherry, Madeira, and Port, are the best that can be employed. If there be no irritation of the alimentary canal, but a torpid state of it, acidulous wines may sometimes, perhaps, be admissible. If the patient desire porter, or has been accustomed to it, you will find that very good ; but you should not give a pint of porter at once. A wine-glass or two may be given every few hours, or perhaps only once in the twenty-four hours. Because a person desires porter, you are not necessarily to give a pint in the twenty-four hours. When there is mild delirium (not delirium *ferox*, but a *muttering* delirium), or when the pulse is rapid and weak, and when extreme debility has come on, then it is right to resort to this treatment ; for it will frequently stop the delirium, or at any rate, check it. But if you go on with it after it has stopped the delirium, it will frequently bring it back ; so that the patient is worse than he was before.

"In this state of debility many give ammonia and ether ; but I cannot help thinking that wine, or good malt liquor, is the best article that can be exhibited, unless the malt liquor bring on diarrhœa. It is much better to give those stimulants which most people like, than to give ammonia or ether. The former are *natural* stimulants, and are

much more grateful to the patient. Care must be taken, with all these things, not to overload the stomach. The moment you find the head affected by them, or the stomach overloaded, it may be necessary to give an emetic."—p. 316.

As additional remedies in this state of debility, our author adverts to the neutral salts in very small and repeated doses, as recommended by Dr. Stevens, who considers that they supply the deficiency of red particles in the blood.

Twenty or thirty grains of the carbonate of soda, nitre, or muriate of soda, or about eight grains of oxymuriate of potass, are to be given every three or four hours. One cannot doubt the testimony on which the good effects of this plan rests; but practitioners in general, we believe, have not found it so successful as the accounts given would have led them to anticipate.

Dr. E. praises quinine as the best tonic that can be given. He prescribes it in doses of three or four grains every three or four hours; and observes, that he thinks he has saved patients in the last stage by administering wine, and good nourishment, and sulphate of quinine in considerable doses. As it is apt to purge, he guards against this by the addition of a little catechu.

"In the last stage of fever, some give opium in small doses, for the purpose of keeping up excitement. Dr. Wall, of Oxford, and Sir John Pringle did so; but others give a dose once in the twenty-four hours, for the purpose of tranquillizing the system. I have no great experience of it as a stimulant; but I know that when a patient has long laboured under fever, it is quite safe to give him a dose of this kind, in order to procure him a good night's rest. I suspect that wine is a better stimulant than opium; although opium is certainly exceedingly useful in the latter stages of the complaint. Some highly praise musk. I need not say that morphia is sometimes greatly adulterated. It is said that opium is not always of a certain strength, and that morphia is; but from being adulterated, morphia is of the same uncertain strength as opium. Opium is particularly useful in procuring sleep, and in putting a stop to vomiting and purging. The muriate of morphia is an admirable form of opium, if not the best."—p. 317.

We think our author's praise of *opium* rather 'faint.' Not only in the last, but in the earlier stage of the complaint, where *enteritis* is a main symptom, its virtues are not yet generally known or appreciated.

"The treatment of fever consists in subduing inflammation, on the one hand, or in supporting the strength, on the other; and you must always carefully look out for local symptoms, and check them. The vomiting is frequently urgent, and very distressing to the patient;

and although effervescing draughts will sometimes stop it, as will also hydrocyanic acid, yet if there be inflammation present, it is not in the nature of these remedies to arrest it; and you must then employ leeches, blisters, or sinapisms. So with regard to purging, opium will frequently put an end to it, and so will all astringents; but, as I have before said, it is best not to give astringents if there be inflammation present. Leeches and blisters will then effectually subdue it, when nothing else will. If the *feces* be exceedingly fetid, you will find it very useful to give yeast, either by the mouth, or in the way of injection. An injection of yeast will frequently very much correct the offensive odour. Some give it in porter. The injection of the chlorides would, I fancy, be useful, but I have no experience of it."

We have reason to believe, that solutions of the chloride of lime, both as draughts and injections, are of considerable benefit. The infusion of malt is also a useful remedy in cases of putrescency.

"In fever it is necessary, every day, to attend to the state of the bladder. It frequently happens, in this disease, that a great accumulation takes place in the bladder; and patients might go three or four days without making water. Great inconvenience may, at last, arise from this source; and therefore it is a point that should be carefully looked after every day.

"There is only one other circumstance that it is necessary to attend to; and that is the longings of the patient, during the progress of the disease, and afterwards. These should be indulged, unless there be some very good reason against it. You see, therefore, that the treatment of fever bears an analogy to the symptoms. You saw that the symptoms of fever varied from those of the most violent inflammation,—the most violent excitement of the system, on the one hand, down to extreme prostration of strength on the other; and the treatment must vary in like manner. It may be requisite that the treatment should be of the most active anti-inflammatory kind, on the one hand; or the most gentle anti-inflammatory treatment, with a moderate support of the system, on the other; or it may even require to be of the most supporting and stimulating kind. Fever is not to be treated because it is *fever*; but according to the circumstances of each particular case. If you have twenty cases of fever, you are likely to find them more or less different from each other, and requiring more or less difference of treatment, according to the urgency of the symptoms. You will therefore remember, that, in fever, you have to vary the treatment, from that of an active inflammation, to that which you employ in mortification, when the mortification is attended by inflammation."—p. 318.

We have thus furnished a specimen of the contents of Dr. Elliotson's *Principles and Practice of Medicine*, and although we have been compelled to abridge and condense some por-

tions, it will convey a better notion of the character and pretensions of the work, than any lengthened disquisition of ours could do. How much soever certain among us may dissent from the author in minor points, we imagine all will agree, that precept and practice such as this are in the main most admirable.

Having already drawn so largely upon our space, we cannot enter upon any additional subjects. On some future occasion we may advert to the volume again, particularly as we are obliged to omit some of the most important topics. We refer, more especially to thoracic diseases, a very finished, and masterly delineation of which is contained in this volume. The author has been long honourably distinguished, as standing in the foremost rank of those, who have formed a corps of observation, for the purpose of exploring the recesses in which those terrible foes of the human race, phthisis, and its allies, had hitherto reigned in almost undisturbed dominion.

It has been objected to Dr. Elliotson, that his mode of treatment is in general rather too heroic,—that the doses he prescribes are excessive, and we must allow there is some ground for this observation, though not so much as some people imagine. The worthy Professor is a great advocate for vigorous treatment, “knocking down the disease at once,” as he is fond of terming it. In his own hands, tempered with discretion, and the tact derived from long experience, beyond question, it may be highly proper; we only fear lest his juniors, in the confidence and boldness of youth, may, fortified by such authority, unwittingly peradventure knock down the patient as well as the disease.

As to the general tone of the work, we cannot perceive any symptoms of that overweening and conceited spirit, which we have heard charged upon the author: on the contrary, he is candid and impartial, frankly avowing to whom he is indebted, and as freely acknowledging when he has been in error or doubt, or is unable to account for certain phenomena.

His language is simple and nervous, and remarkably free from technicalities, and inflated epithets; while his style is of that pleasant, familiar kind, neither too bold, nor too florid, which accords well with the subject, and the occasion. Some of his descriptions are graphic in a high degree, and there is an agreeable vein of ‘bonhomie’ and humour throughout the work. We have no difficulty in believing, that the worthy Professor was much esteemed and respected by his class at University College.

The medical world is under obligations to Dr. Rogers for having undertaken the editorship of this work. He has evi-

dently bestowed great pains in emending the text, correcting reporters' mistakes, and supplying deficiencies; in every way proving himself a faithful Achaetes. Still, we have observed some flaws; and there are not a few errors, both of orthography and punctuation, which must not be allowed to mar a future edition. Moreover, we are of opinion, that the pruning knife might be used with advantage in some instances: we have noticed here and there a diffuseness of phraseology, quite out of keeping with the general tenor of the work, and frequent redundancies and recapitulation as to sentiment, which, however expedient to be used in oral discourse, are much better avoided in print, unless, indeed, the work be intended to be confined to the library of the mere tyro, which is not the case, we presume, with the volume before us. At the end of the volume, the editor has supplied an Appendix, containing much valuable matter derived from various sources; and in the body of the work, under "Diseases of the Heart," he has appended, in the shape of foot notes, the chief part of Dr. Elliotson's excellent treatise on that subject. To conclude, we cannot entertain a doubt, that this work, embodying, as it does, the mature experience of an able and accomplished physician, will be welcomed by all classes of the Profession. We predict for it a wide circulation, and the warm encomium of every one who becomes possessed of it. Less than this will not be commensurate with its high deserts.

Elements of Natural Philosophy; being an experimental Introduction to the Study of the Physical Sciences. By GOLDING BIRD, M.D., &c.

DR. GOLDING BIRD is favourably known to the Profession as a scientific inquirer, and, therefore, any work from his pen will be received with respect. But the present volume may be allowed to stand upon its own merits. It is "chiefly intended as a text book for the student, whilst attending lectures on physics, or as preparatory to his entering upon the study of larger and more elaborate works." For this purpose it is admirably adapted, and the union of illustration, with lucid description, greatly increases the facility of acquiring information.

We should rejoice to find it in the hands of every student, as we are confident, that an intimate and accurate acquaintance with Natural Philosophy, is the best introduction to the science of Medicine.

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ERRATUM

In Dr. O'Beirne's Paper.

Page 324, line 5 from bottom, for *siologogue* read *diuretic*.

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PART I.
ORIGINAL COMMUNICATIONS.

ART. XI.—*Disease of the Brain dependent on Disease of the Heart.* By ROBERT LAW, M. D., Fellow of the College of Physicians; Physician in Ordinary to Sir Patrick Dun's Hospital, &c. &c.

ALL the organs of the body are so bound up together in the same bundle of life, that it rarely happens that one suffers, at least seriously, without involving others; and in an exact ratio of the importance of each organ, and the extent of sympathetic relations that it exercises, is the degree of mischief that its derangement spreads through the economy. When we apply these considerations to the heart, the central organ of the circulation, and reflect upon the functions it has to fulfil, that it is both the reservoir from which all the organs of the body are supplied with that upon which their very life depends, and that it is the agent to minister such supply, we can readily understand how essential to the health of the general system is the integrity of this important organ.

And as the use of the circulation is not limited to carrying into the different parts the materials of secretions, exhalations, nutrition, &c., but that it also keeps them in an habitual state of excitation by the shock which it impresses on them when it reaches them, and which seems to be derived mainly from the heart; (with which shock Bichat connected very much the energy of the function of each organ, and considered that this object was contemplated in the position which the vessels conveying the blood to each organ have with respect to it, even the most favourable position for communicating such shock;) so also the derangement of the circulation or the interruption of the supply of blood to any organ, does not alone keep back from such organ its material of secretion, nutrition, &c., but also hinders that impulse which appears to be so essential to the due performance of its physiological function. The phenomena of syncope illustrate this point. We know that syncope is a sudden suspension of sensation and motion, produced by a cessation of, or a greater or less interruption of the circulatory movement conducting the blood to the brain. In some cases of great debility and prostration it only requires one to rise up suddenly from the recumbent posture to produce fainting. We would inquire, what has the change of position done to effect this? It has only imposed on the central organ of the circulation the difference of labour required to propel the blood under slight circumstances of mechanical disadvantage, compared to what they were before, a difference of force unheeded and unfelt in ordinary health; as we are not conscious of the heart feeling any difference of fatigue in propelling the blood to the heart when we sit or stand, or when we assume the horizontal position. But when the health is weak, this slight demand of increased power upon the heart, and its not being able to respond to it, produce this serious result, even the suspension of the function of the brain as the organ of sensation and motion. This proves to us the intimate and delicate relations existing between these important organs, and in particular circumstances, upon what very slight causes depend their functional derangement.

The permanent well-being of the system requires an equable and regular supply of blood for all its organs. They all require their due proportion. There is a nice balance of the circulation which must be maintained in order to insure health; the heart is mainly instrumental in keeping this up: and when this organ is diseased, the worst results of its disease are the consequences of the interruption to this equable circulation.

When the heart is in its healthy and normal condition, when its mechanism is perfect, it is well calculated to deal out to each organ its due supply of what constitutes its proper nutriment and stimulus; and with a degree of force consistent with the health and well-being of the several organs. But when disease so affects it as to interfere with its double office, that of being the reservoir and agent of supply, we find the injurious effects of such disease exhibiting themselves, in some organs having more, while others have less than their due quantity of blood, the excess and the deficiency being equally hurtful to the respective organs in which they occur, although in a different way.

Pathologists have almost entirely confined their attention to the excess of the normal quantity of blood or the congestion produced in organs by disease of the heart, but have overlooked the deficiency that must necessarily result to other organs, and consequent hurt to their nutrition and function. Thus in disease so affecting the mitral valve as to lead to a considerable narrowing of the opening between the auricle and ventricle, exclusive attention has been directed to congestion of the lungs, liver, &c. and no notice has been taken of any ill effects resulting to other organs from their supply of blood being proportionably diminished; a diminution, the expression of which we have during life in a small pulse, and in the midst of which the beat is sometimes altogether wanting, denoting the almost entire retrograde motion of the blood from the ventricle into the auricle through the imperfect valvular apparatus; and which we find indicated after death by the aorta being so reduced in size as not to exceed the com-

mon carotid ; a diminution which it has undergone in obedience to the physiological law which establishes a relation between vessels and the size of the stream of fluid which they convey. It is to the effects of this diminution of the quantity of blood upon the brain to which we would now direct attention, a point of pathology which we believe to have been hitherto almost, if not altogether, overlooked.

The influence of diseases of the heart in the production of disease of the brain, under a single modification, was noticed first by Legallois in a communication made to the Society of the School of Medicine in Paris. This was soon followed by one from M. Richerand, of which the case of the illustrious Cabanis was the subject. The particular modification of disease to which we allude was apoplexy or sanguineous effusion into the substance of the brain, dependent upon hypertrophy of the left ventricle of the heart.

M. Bricheteau took up the subject in an article in the *Journal Complimentaire des Sciences Medicales*. He alludes in this article to the notice that had been already taken of the subject both by Legallois and Richerand, but remarks that the few observations or cases that had been adduced to illustrate it, proved that it was not considered as frequent as his experience convinced him that it was. M. Bricheteau considers that there are three kinds of cerebral affection dependent upon hypertrophy of the left ventricle of the heart, viz. congestion, effusion of blood, softening and disorganization of the brain. We are quite satisfied that M. Bricheteau's statements are, to a certain extent, true ; still we are equally convinced that he has mixed up affections both different in their nature and in their mode of production. For while we fully admit that the increased impulse of the heart, determined by the hypertrophy of the left ventricle, must operate injuriously upon the brain, from the peculiarity of its vessels, little able to sustain such impulse, and especially if to their normal unfitness be superadded the change in their structure, which time produces in the arterial tissue

generally, a change which we have, perhaps, more frequently observed in the arteries of the brain than elsewhere ; yet we are equally convinced that M. Lallemand has well suggested this qualification to M. Brichteau's statement, that in order that the brain be exposed to this impulse, resulting from hypertrophy of the left ventricle, *the impediment to the circulation, upon which the hypertrophy most commonly depends, must be situated more remote from the heart than the origin of the vessels which convey the blood to the cerebral organ.* This qualification of M. Lallemand is partially true, and shows why apoplexy is not nearly as common as hypertrophy of the left ventricle of the heart. In fact one of the most frequent cases of hypertrophy of the left ventricle is an obstruction placed at the very mouth of the aorta, owing to an altered condition of the valves situated here. In this case the augmented action of the organ (which is sure to lead to permanent hypertrophy) expends itself upon the obstruction, and is not propagated beyond it, as we may judge from the pulse, which is not characterized by tone or strength. The obstruction, when placed here, serves as a protection, or if I may be allowed the expression, a kind of breakwater to the parts situated beyond it. But with the hypertrophy and with the obstruction occupying this position, we still find cerebral disease. It is to this point that we would draw especial attention, as we consider it to have been either completely overlooked, or its nature and mode of production to have been misunderstood. In this case the hypertrophy has no share in the lesion of the brain ; it is quite independent of it, and solely due to the obstruction to the passage of the blood to the head. In truth, at the time that this point of pathology—disease of the brain caused by disease of the heart—was first noticed, to use the phrase of M. Bouillaud, the law of progressive development of pathology had not so far extended to the morbid conditions of the brain as to place the physician of that day in a position to appreciate the difference between the particular lesion to which we allude, and which we exclusively

ascribe to the disease of the valves of the aorta, or rather to their effect on the supply of blood to the brain, and the lesion produced by hypertrophy of the left ventricle without the disease of the valves, namely, the breaking down of the substance of the brain by a *coup de sang*. The exact nature of ramolissement of the brain was but imperfectly, if at all understood; and even now we would ascribe to this ignorance of the nature of this lesion, its being confounded with others widely differing from it.

Whoever is acquainted with the history of this particular modification of cerebral disease knows that M. Rostan was the first to direct very special attention to it. The particular circumstances under which he had occasion to observe it led him to regard it as an affection unconnected with and independent of inflammation; as, in fact, an effect of imperfect nutrition. The Salpêtrière at Paris was the field of M. Rostan's observations; and all its inmates being persons of advanced life, he found in all the cases of the disease that occurred to him there, the exact conditions necessary to support his view of it. He drew the general conclusion that it was in all cases a lesion independent of inflammation. M. Rostan had not long promulgated this view of the nature of this particular lesion, when M. Lallemand as dogmatically asserted that ramolissement of the brain was always the result of inflammation. Here, as in many such cases, the advocate of either opinion had some grounds to sustain him, the truth lying between the opposing statements. The different opinions would have found their confirmation in the effects of disease of the heart upon the brain. Thus M. Lallemand could have referred to the coagulum of blood effused into the substance of the brain from a heart whose action had been greatly increased by hypertrophy of its walls, and this coagulum acting as a foreign body on the surrounding cerebral matter, and exciting an inflammatory action in it; while M. Rostan would have found a stronger confirmation of his particular view in such cases as I shall presently adduce, than he could

have had from the more indirect grounds which led him to form his too general conclusion. The first case which drew my attention to this morbid complication, and discovered to me its exact nature, was one which I had occasion to observe in 1834 in the Richmond Hospital: the case was that of a female aged 17, labouring under disease of the heart, and hemiplegia of the right side. The heart's action was very strong and tumultuous, and accompanied with *bruit de râpe*; the pulse was very small and irregular; in addition to the hemiplegia she had lost the power of speech. The account that her mother gave of her illness was, that for two years she had been labouring under distressing palpitation of the heart, and oppression of breathing; and that the paralytic affection had come on at a much later period, and very gradually. She only survived her admission into hospital four days. The examination of the body disclosed the following appearances:—The brain scarcely exhibited any trace of blood; it was in a complete state of anemia; when cut in at the upper and back part of the left hemisphere, a quantity of a greenish-yellow fluid, of the consistence of cream, poured out, leaving a regular depression under the surface. There was considerable hypertrophy of the left ventricle of the heart; the mitral valve was quite unfitted for the performance of its functions by induration of its structure, and having warty vegetations attached to its free margin; the aorta was much smaller than natural, as also its primary branches; the lungs were very much congested, and exhibited many nodules of pulmonary apoplexy. The circumstances of this case first suggested, nay proved to me, that ramolissement of the brain, the result of disease of the heart, is not the invariable effect of the blood impelled to the brain with undue violence, but that it sometimes takes place under precisely opposite circumstances. The anemic condition of the brain, and the smallness of the aorta and the branches proceeding from it on the one hand; and the congested state of the lungs with the pulmonary apoplexy on the other, lent their united testimony

in proof of this. By as much as the brain was deprived of its due supply of blood, by so much were the lungs over supplied ; and that this state of things was of considerable duration we concluded from the diminished size of the aorta and its branches, which was a physiological accommodation of these vessels to the diminished stream of blood that they had now to carry, the greater proportion of which regurgitated or was driven back through the imperfect mitral valve. The lungs in fact in this case were very much in the condition of the brain, when affected from the increased impulse of a hypertrophied left ventricle ; the pathological conditions of the two organs were reversed, the impulse of the hypertrophied ventricle being directed backwards towards the lungs, instead of in the direct course of the circulation and towards the heart.

The next case of complicated heart and cerebral affection was Metcalf, a shoe maker, aged 34, who came under my care in May, 1838. He had complete paralysis of the right arm and leg, and his speech was so affected that it was in vain that he tried to make himself intelligible. He pointed to his forehead as the seat of pain. The heart's action was accompanied with a strong impulse and a bruit de soufflet in the superior internal cardiac region. There was a marked disproportion between the strength of the pulse and the action of the heart ; the calorific function was very weak, especially observable in the cold, livid, congested state of the paralyzed hand. We could procure no information as to the duration of his illness, or the order in which the heart affection and paralysis had come on, from his utter inability to express himself. Our diagnosis was ramolissement of the brain consequent upon disease of the heart, which from the locality of the bruit de soufflet, and the strong impulse, we referred to the aortic valve. We felt,* at the same time, that

* The size of the pulse at the wrist, is in general a true measure of the extent of contraction of the left ariculo-ventricular opening. But we shall have a very small pulse, or even no pulse at all, when this opening, so far from being smaller, is larger than natural ; when the diseased mitral valve admits of the complete or partial regurgitation of the blood. But in the former case, when the contraction is considerable, the pulse is constantly small, while it is only occasionally so in the latter.

the small pulse was rather the pulse of mitral valve disease, neither had it the thrill of the pulse of aortic valve disease, nor was it visible, while he was under our care. At the same time that we never missed the *bruit de soufflet* from where we had it first, we heard it occasionally, but not very distinctly, a little inferior and external to the left mamma, or in the situation of the mitral valve. We regarded the cerebral portion of the complication as the most serious, and to it directed our chief attention. He was ordered mercury in the minute doses that we have recommended in a previous number of this Journal; a grain of calomel to be made into twelve pills, with extract of gentian, and one of these to be taken every hour. In four days he was freely salivated. After this he took James's powder in small doses, and had leeches applied behind his ears from time to time, when he complained of headach, which his own imperfect expression, and flushing of the face, with heat of the head, sufficiently announced to us. Besides these means he had cold lotion to the forehead, and mustard foot baths occasionally. In the beginning of August he had recovered almost the complete use of the paralyzed limbs, and had but slight imperfection of his speech, nor did the heart affection distress him much. He now left us, and resumed his trade of shoemaker.

Before Metcalf left the hospital, H. Dooley, aged 40, cornporter, was admitted, complaining of most urgent dyspnoea, so distressing at night as to oblige him to sit up. Percussion yielded a dull sound, much beyond the normal limits of the cardiac region, particularly internally. A double *bruit de soufflet* was heard in the superior internal cardiac region, or in the situation of the aortic valves, and this seemed to be continued up into the large arteries proceeding from the aorta. As the stethoscope was applied external and a little inferior to the left mamma, a more obscure single *bruit de soufflet*, accompanying the first sound of the heart, was perceptible. The heart's action was attended with a strong impulse; the pulse was full and jarring, (vibrating,) and visible at the wrist; there was a

marked palish, or rather greenish yellow hue of face, with pallid lips: no dropsical swellings. He referred his illness to his mode of life, which subjected him to sudden alternations of heat and cold, and considered it to be of three months' duration. Our diagnosis was—disease of the heart, consisting in imperfection of the aortic valves, with consequent hypertrophy of left ventricle, and probable disease of mitral valve. We ordered for him small doses of the tincture of the muriate of iron, with a few drops of tincture of digitalis, with occasional leeches to the region of the heart. His condition was such, in fact, from the time of his coming under our care, that our main consideration was to alleviate as great anguish and suffering as I ever witnessed; and in this, as in many similar cases, the patient referred his principal pain and distress to the epigastrium. Leeches applied here afforded little, if any relief. He died a little more than a fortnight from his admission. Examination of the body discovered to us an enormous enlargement of the heart. As the organ lay in situ, in the pericardium, it seemed to be at least twice its normal size. Its greatly increased bulk was due partly to large coagula distending it, but principally to the effects of disease upon itself. The left ventricle was both hypertrophied and dilated; its walls were an inch thick, and its cavity much enlarged (eccentric hypertrophy.) The right ventricle was alone dilated, its walls retaining their normal thickness. The valves of the aorta were thickly studded, especially on their free margin, with warty, cauliflower vegetations. A column of water, poured on them from the artery, filtered through into the ventricle. The mitral valve had the same vegetations, although in a less degree, on its ventricular surface and free margin. The lungs were œdematous and congested.

On opening the head, and removing the brain from its position, we found on the inferior surface of the anterior lobe of the left hemisphere, where it rested on the orbital plate, an irregular oval patch of softened structure, about the size of a section of a walnut, of a dirty greenish colour, occupying and destroying the surface of the convolutions, but not extending deeply into

their substance. We were quite unprepared for this lesion, as the patient made no complaint during life which led us even to suspect it: there was no paralysis, nor any mention of weakness of either side.

The cardiac disease presents us with a good specimen of that modification of disease which my friend Dr. Corrigan was certainly the first accurately to describe, although others have set up a claim to its discovery. It consists in such an affection of the aortic valves as prevents them closing the mouth of the artery, and therefore allows the regurgitation of the blood into the ventricle. Its signs are—a double *bruit de soufflet*, generally a marked impulse, a peculiar vibrating pulse, and a visible pulsation of the larger arteries; a sallow, pallid complexion, too, is almost constant. If we be now asked, how do we explain our theory of the ramolissement of the brain being caused by deficient nutrition in this case, our answer is, that the ordinary disease of the valves of the aorta, in this case, acts in a two-fold manner to deprive the brain of its due supply of blood. In the first instance, the nature of the lesion is generally such as to prevent the valves closely applying themselves to the sides of the artery; and these, forming an obstruction at the mouth of the vessel, hinder the blood issuing in a full stream from the ventricle; and in the next place, the regurgitation into the ventricle through the imperfect valves. And that our views upon this point are correct, we are fully persuaded from the fact of the perfect coincidence that exists between the signs and symptoms of this lesion and those of hæmorrhage: we have the same *bruit de soufflet* of heart and larger arteries in both; the same vibratory character of pulse; the same visible pulsation of the arteries; the same sallow, pallid complexion; and we have also observed, as a symptom of this cardiac lesion, the same vertigo and giddiness which are so constantly observed in profuse hæmorrhage: and, as Dr. Gooch observes that remedies are a kind of test or reagent to establish the nature of a disease, if the mode of treatment applicable to this modification of heart

disease be what is suited to the system when suffering from hæmorrhage, it will serve to establish a closer analogy between them. Dr. Corrigan, in illustration of the injurious effects of the lowering system of treatment in this form of disease, and of the advantage of the opposite mode, adduces the first case of it that he met with. The patient had undergone the ordinary treatment for heart disease, viz. repeated bleeding, strict regimen, digitalis, repose, &c. These means, long persisted in, reduced him very much; and his disease, instead of getting better, appeared to become worse. A lucky turn of circumstances now took him to the country, where medical advice was not so attainable. He changed his mode of life, laid aside medicine, improved his diet, took exercise, and in a short time his health underwent such a decided amelioration as to allow him to take charge of a country dispensary, in the active and laborious duties of which he exercised himself for sixteen years. He, at length, sunk under the disease. Dr. Corrigan had an opportunity of exhibiting the heart at the Pathological Society; it afforded a most striking specimen of vegetations on the aortic valves, which effectually interfered with the function of these valves. The results of this case suggested to Dr. Corrigan a mode of treatment, in this particular disease of the heart, very different from that which had hitherto been pursued; and he saw the reason for the suitableness of such change in the nature of the lesion. He fancied that the hypertrophy of the left ventricle, which is constant in the diseased condition of the aortic valves, was a wise provision of nature to sustain the regurgitating blood, and that any treatment which had a debilitating effect (which, indeed, was the general effect of all modes of treatment usually and indiscriminately employed in all diseases of the heart,) must necessarily tend to frustrate this intention; he therefore adopted in subsequent cases a tonic and invigorating plan. We have adopted the same plan, but we own we see for it other reasons, in addition to those which suggested themselves to Dr. Corrigan. We see the hypertrophy of the ventricle not alone

required to sustain the returning blood, but also to propel it through the mouth of the aorta, not allowing a free exit, from the state of the valves. To weaken the system generally, would be to weaken this propelling power of the ventricle, and so disable it from sending on even the smaller quantity of blood, which the unimpaired ventricles could discharge through the diminished aortic orifice. We, in fact, see in the lesion the system deprived of its due supply of blood in two ways—both by the diminished quantity of blood that passes from the ventricle into the artery, and by the passing back again into the ventricle of much of that diminished quantity. We see the pallid ensanguineous face, with the frequent symptom of vertigo and giddiness added to all the physical signs of hæmorrhage, all pointing to the same treatment that the system, when it has been weakened by hæmorrhage, requires.

When we reflect upon other diseases, whose constitutional symptoms are nearly the same as those of hæmorrhage, as that form of chlorosis whose essential feature consists in an imperfect elaboration of the blood, when this fluid seems to want its due consistency, and find that these diseases exhibit all the physical signs presented by the cardiac lesion in question, we see additional reason to believe that the applicability of the same treatment to all depends upon their close connexion, if not upon their identity, and that this relation consists in the privation of either the proper quantity of blood, or in the cases of imperfect sanguification, in its altered quality; the same, both physical signs and constitutional symptoms, resulting from such alteration.

Metcalf, to whose case we before alluded, after being absent from the hospital a year, was re-admitted July 9, 1839, with his symptoms very much aggravated from what they were when he left us. His articulation was so very indistinct that we were quite unable to procure any information from him. The signs of the heart affection had undergone a very marked change: instead of hearing the *bruit de soufflet* superiorly and internally

as we did before, its maximum of intensity was inferior and external to the left mamma. As we continued our examination round the body, and posteriorly, we still heard it, and so loud as almost entirely to mask the respiration. It was much louder in the posterior right than left. The pulse, when he was admitted, was small, while the heart's action was strong, and attended with impulse. There was considerable fulness and dull sound in præcordial region. After being a few days in the hospital he got an acute attack of rheumatism in the right thumb, which caused considerable pain, redness, and swelling of it. The radial artery at the corresponding wrist beat much stronger than the other. His breathing was very much embarrassed. Through the loud sound of the heart posteriorly we could detect a crepitus in both lungs. The surface of the body exhibited a whitish, doughy appearance, such as we often observe to be present in acute rheumatism. The face was occasionally flushed, but generally had the same pallid hue as the rest of the body. The change in the signs of the cardiac affection, from the time he had been under our care before, consisted principally in the altered locality of the *bruit de soufflet*, which formerly pointed to the aortic valves, but which now seemed to indicate an affection of the mitral valve. He retained the weakness of the right side, which had been paralyzed. His symptoms did not amend; his breathing became more laboured; the crepitus in both lungs more distinct; the heart's action could be heard through all parts of the chest; but the *bruit de soufflet* was always loudest a little below and external to the left mamma. The cardiac sound, too, was always more distinct in the posterior right than in the left. Percussion posteriorly yielded a more dull sound in inferior posterior right than in left, upon the cause of which we charged the heart's action being more distinct here. The right foot was the first to swell; after some days the left also became œdematous. The report on September 5 was: considerable œdema of both feet and legs; face pale and greasy; pulse 96, very small, but regular; he cannot lie down at night;

crepitus in both lungs posteriorly ; dulness, on percussion, in postero-inferior right. Although his intellect was intact, he could not render himself in the least intelligible. He suddenly expired the next day, having spit a little blood.

Examination of the Body.—The brain seemed smaller than natural, and as if it did not fill the cranium ; the arachnoid was of a greyish white appearance, and thickened ; there was a gelatinous effusion on the surface of the brain. On making a section of the left hemisphere, about midway between its anterior and posterior extremities, on a level with the *corpus callosum*, we found a portion of the substance of the organ, about two inches in length, and an inch in depth, broken down into a soft greenish substance. The anterior portion of the *corpus callosum* also was of a green colour, and of a creamy, cheesy consistence. On the surface of the right hemisphere, near its posterior part, there was a depression or indentation, which, when cut into, exhibited the same altered structure and appearance as that on the left side : all the medullary portion of the organ was of a greenish hue.

When the sternum was raised, the heart, with its investing pericardium, exhibited an enormous size ; it seemed to have pushed aside both the lungs. The right side of the pericardium adhered to the internal surface of the right lung ; the pericardium contained about eight ounces of pale straw-coloured serum ; the right auricle was immensely distended with black grumous blood. The cavity of the right ventricle was very much enlarged, and its thin muscular wall exhibited a striking contrast with that of the left ventricle, which was very much thickened, and its cavity also very large. The *septum cordis* was nearly an inch thick. The *carneæ columnæ* of the left ventricle were considerably hypertrophied. The valves of the right side were healthy. There appeared to be only two aortic valves ; two being so united together as only to make one. To the free margin of each valve were attached warty, cauliflower vegetations, of various sizes and lengths ; some clustered toge-

ther; others hanging down singly, among which one, about two-thirds of an inch in length, hung into the ventricle. The mitral valve was very much thickened in its substance; to its free edge, also, were attached smaller vegetations: upon both its ventricular and auricular surfaces were granules, which gave it a rough, scabrous appearance. These same granules studded the surface of the auricle. The *cordæ tendineæ* were very much thickened; the auriculo-ventricular opening was not contracted; the heart, when emptied of its blood, weighed twenty-two ounces. The right lung was so congested and condensed in the structure as to sink in water; it was of a rose-pink colour. The left was also congested, but in a less degree. The abdomen contained some serum, with flakes of lymph in it. The liver was enlarged, but exhibited no abnormal appearance.

I predicted the nature of the cerebral lesion that would be found in this case, a year and half before I had an opportunity of verifying it; and subsequent to making this diagnosis I met with Dooley's case, which exhibited precisely the same, both cerebral and cardiac lesion, and which, of course, made me more confident in my diagnosis. The difference between the two cases consisted in the cerebral lesion not announcing itself, by any symptoms during life, in Dooley's case; but the extent of disorganization was much more considerable in Metcalf's case. The nature of the cardiac lesion was precisely the same in both. In our former mention of Metcalf's case we alluded to the lower temperature of the paralyzed side: our statement would have been more correct had we declared that the caloric function generally was less energetic than natural. The occurrence of the cerebral lesion, in these two cases of heart disease, seems to us to illustrate both the nature of the one disease and the other. The cerebral lesion was precisely the same as that which we observed in the first case which came under our notice, in which the ensanguineous condition of the brain, and the smallness of the aorta and its primary branches, on the one

hand; and the gorged, congested state of the lungs, and the state of the mitral valve allowing regurgitation, on the other, contributed their both direct and indirect testimony to the deficiency of blood transmitted to the brain. The identity of the lesion would argue that this other modification of heart disease, with which we have seen it connected, operated in the same way to produce it as the former; and as the former acted by depriving the brain of its due supply of blood, that this likewise was the mode of operation of the other. This goes to establish a still closer analogy between the cardiac affection and hæmorrhage, which we have seen already to resemble each other in so many of their physical signs and constitutional symptoms.

In the two cases to which we have just alluded we saw the condition not only of the aortic valves, but also of the mitral valve, co-operating to produce the cerebral lesion, in the way in which we supposed it to take place. We saw such a condition of the aortic valves, as not only to prevent them closely applying themselves to the sides of the vessel, and so not admitting a full stream to pass from the ventricle into the artery, but also so altered as to allow the blood freely to flow back into the ventricle; while we also saw the mitral valve so changed in its structure, and so imperfectly to fulfil its office, as to present a difficulty to the blood in its direct passage from the auricle into the ventricle, and also to allow it to regurgitate from the ventricle into the auricle. The congested condition of the lungs in each case proved this to have been the fact.

We shall content ourselves with the details of one other case, although we might produce more.

Mary Murray, aged 20, unmarried, admitted into hospital August 6, 1838, with symptoms of fever. Pulse 108; skin hot and dry; tongue loaded; thirst; heart pulsates strongly. She complains much of pain of her back and head; bowels confined; abdomen full.

Enema Terebinthinæ statim; Lotio frigida fronti; Haustus effervescens.

7th. Pulse 108, soft and compressible; skin not particularly hot; face rather flushed; tongue dry, of a reddish-brown colour; she is in a heavy, lethargic state; discharges passed unconsciously during the night.

Hirudines quatuor pone singulas aures; Fomentationes Terebinthinatæ Cruribus; Pulv. Jacobi veri gr. ii. quartis horis.

We directed that if she continued in the heavy, lethargic state till towards evening, a blister should be applied to the nape of the neck.

8th. The stupes had the effect of rousing her from the stupor for a time, but she relapsed into it again, and the blister was applied. Pulse very soft and compressible; heart beats with a strong impulse, and with a loud *bruit de soufflet*; tongue more moist; no headach; she muttered a little during the night; respiration laboured; bowels torpid. We were somewhat perplexed by the opposite indications of the heart and pulse, and began to suspect that they were not connected with her present illness, but depended upon a previous affection of the heart. Upon this point we could not procure any information from the patient herself, owing to the state in which she was. We directed a repetition of the turpentine stupes to the legs, and James's powder, and, from her state of weakness, allowed her two ounces of wine. We continued this treatment for three days, and increased the quantity of wine, under which she improved. The heart's action was not increased, and the pulse diminished in frequency. She still retained a heaviness and lethargic state, for which we applied a blister to the vertex, which quite roused her. Her bowels continued torpid, and only responded to enemata. On the 14th we began to allow her beef tea, and to diminish her wine. On the 18th we substituted porter for the wine. The relation between the action of the heart and the pulse continuing the same under all circumstances of her illness, confirmed us in our first conjecture, that there was a previous heart affection. This she now admitted, and dated its existence from some time back. We supposed it

to be disease of the mitral valve, from hearing the *bruit de soufflet* most distinctly towards the left mamma, and also from the smallness of the pulse. On the 20th she was reported convalescent, and ordered a mutton chop.

On the 21st, without her making any complaint on the subject, we perceived that she had a weakness nearly amounting to paralysis of the left hand and arm, which she thought so little of as to believe it to have been the effect of her having lain upon it during the night. However, we soon saw that it was more than this, for her speech was thick and less distinct. When she protruded her tongue the point turned to the left (affected) side. On being questioned, she said she had some difficulty in swallowing. We found that the left leg was also weak. All these symptoms came on when she had laid aside all medicine, and when, every symptom of her fever having completely disappeared, we felt ourselves warranted in putting her on full diet. There was no flushing of the face; no heat or pain of head. The pulse was reduced in frequency, although the heart still retained its strong action, with its accompanying *bruit de soufflet*. The hand of the affected side was blue and livid, and of an inferior temperature to the opposite one. There seemed to be a general languor of the system. We directed for her a combination of extract of *nux vomica* and James's powder, and *infusum arnicæ*. She took these medicines for some time, and had occasional blisters to the nape of the neck, but did not seem to derive any benefit from them. Her mind seemed to become weaker, and her countenance began to be quite idiotic. Her mother now removed her from the hospital, and kept her at home for some time, when she became almost quite imbecile, so that she sought to gain her admission into the lunatic department of the House of Industry; but not succeeding, she sent her to the country to lodge with a farmer. While there her clothes took fire, and her body was extensively burned. In six weeks, although her life had been in imminent danger, she not only recovered the effects of the burn, but her general health

became greatly improved. I saw her November 1st, 1839, and was greatly struck with the amendment in her appearance since I had last seen her. Her countenance bespoke some degree of intelligence, instead of the vacant, unmeaning expression that it had before. Her general health and strength were very much improved. Her left side still continued weak, and the left hand much colder than the right. The heart still beat strongly, and with the *bruit de soufflet*, while the pulse was small and feeble. She quite lost a distressing pain in the left side of the head, from which she had been scarcely ever free. All this amendment dated itself from the time of her recovery from the burn. We forgot to observe, in the course of the case, that when she was with her mother, after leaving the hospital, she used to faint frequently.

This very interesting case seems to us strongly to illustrate the point we are considering. We have little doubt that disease of the mitral valve was the cardiac lesion. The want of relation between the heart's action and the pulse, and the locality of the *bruit de soufflet*, are the principal grounds upon which we form this conclusion. The small pulse is a measure to us of the small quantity of blood issuing from the left ventricle into the general circulation, and the consequent deficient supply to all parts deriving from this source, to the brain among the rest ; and perfectly consistent with this view is, what we readily admit, that many of the symptoms which she exhibited in the fever, such as the disposition to coma, oppression, obstinate torpor of the bowels, &c., were attributable, in a certain degree, to the congestion of the brain consequent upon this cardiac lesion, as we see the same effects, although in a modified form, almost constant in the lesion ; but all these symptoms had, in a great measure, disappeared when the hemiplegia came on. Nor does congestion often produce hemiplegia ; and as it is transient in its nature, if it pass away without destruction of life, its effects also will soon disappear.

We shall only cursorily observe on another case, that of a

female aged 32, who exhibited the combined lesion of heart disease, indicated by a constant bruit de soufflet in the region of the mitral valve, with a pulse very disproportionate to the force of the heart's action, and of cerebral disease indicated by hemiplegia. Her speech was so affected that she could give us no information. We learned from her friends that she had been long labouring under distressing palpitations, but that the hemiplegia was comparatively of a recent date. She was a good while under our care in hospital, and left us considerably improved. We gave her mercury in fractional doses, so as to produce tenderness of the gums, with three grains of calomel. We then put her on small doses of James's powder and extract of *nux vomica*, and from time to time had leeches applied behind the ears; she also had foot-baths with mustard. At times she became intelligible; in fact in these cases we found, in general, the state of the speech a tolerably good index of the state of our patient, it being plainer and more distinct as he or she improved.

We shall close our observations on this part of our subject with the *post mortem* examination of a distinguished individual, exhibiting this complication. As the case occurred under circumstances to prevent our procuring its details, we could alone learn that there was during life a remarkably infrequent pulse, sometimes not exceeding twenty-five beats in the minute. We also heard that he had been subject to syncope.

Appearances observed on examining the Body of the Earl of K—, October 19, 1839.—The cranium was thick, and the bony substance very hard, so that the incision of it with the saw was more difficult than usual. The arachnoid was thickened and opaque over the entire convexities of the cerebral hemispheres. The cellular texture of the pia mater was universally and considerably infiltrated with serum.

Several convolutions of the cerebral substance were shrunk, so as not to be more than half their size. The lateral ventricles were enlarged and filled with a limpid fluid. *The substance of*

the left hemisphere, both cortical and medullary, was so softened as to present an almost creamy consistence. This change occupied about one-third of the hemisphere, towards its middle and posterior part, extending from the external surface on the one side, to that of the ventricle on the other.

The principal arterial ramifications at the base of the brain were thickened by opake yellow depositions in the substance of their tunics. When the brain had been removed, a considerable quantity of fluid remained at the base of the skull, and much had escaped in the course of the examination.

The pericardium was adherent to the left ventricle of the heart for a small space. In the mitral valve there was a small scale of bone, apparently not sufficient to interfere with the function of the part. *The semilunar valves of the aorta were thickened and partially ossified, so that they could have neither effectually closed the entrance of the artery, nor have lain smoothly against the side of the vessel.**

From our experience of other cases, where the *post mortem* appearances resembled exactly those which we have just transcribed, and where we had every reason to believe that the cerebral stood to the cardiac lesion in the relation of effect to cause; we would venture to believe this might have been the order of pathological development in the present instance. And we can easily understand how the cardiac lesion may have eluded observation until it had attained such a height as materially to interfere with the functions of the heart, while no sooner was the brain affected than it announced its injury by symptoms plain and obvious. Many such instances do we meet with in pathology, where the disease of one organ will not materially derange the health of the system generally, until it implicates in its sufferings an organ more important than itself.

* I am indebted to my friend, Dr. Croker, for the preceding details. The examination was conducted by Mr. Lawrence and Dr. Tweedie. Since I transcribed the above, Dr. Tweedie, under whose care the case latterly was, kindly furnished me with some particulars of it, confirming the facts of the state of the pulse, the disposition to syncope, &c.

when the affection of this organ, secondarily engaged, will draw upon itself exclusive attention, and thus divert us from what was the real *point du depart* of the disease. And that disease, of even so important an organ as the heart, may exist unnoticed, we have often seen in cases of acute rheumatism, where, without any complaint from the patient, we have applied the stethoscope to the cardiac region, and there discovered a distinct *bruit de soufflet*. Our further inquiries generally elicited that the patient had before suffered from acute rheumatism, but had completely recovered; however, to our interrogatory if he could walk as fast, or ascend a height with as much facility as before he had the attack, he then generally admitted that "his wind was not quite as good," although he never thought of noticing it until he was now reminded of it. We have under notice at present not a few cases, which have been long since affected with acute rheumatism, and in whom a constant *bruit de soufflet* bespeaks an organic disease of the heart, from which they have so slight inconvenience as to be able to engage in the duties of active life. We can easily believe that the cardiac lesion, in the case of the distinguished individual in question, may have been the result of an insidious growth in its earlier period, and that subsequently the more prominent and striking phenomena of cerebral disease diverted attention from it. Although we conceive this to be not only possible, but likely, yet there is nothing to prevent the cerebral lesion taking place first, and then, and independently, the cardiac lesion; and this latter then modify the cerebral symptoms, so as to impress them with the stamp of an original cerebral affection, dependent on cardiac lesion.

We now come to the consideration of the most important part of our subject, the practical results of it. And if our observations be true, as we confidently believe they are, the practical consequences involved in them are of the most important nature, as they must lead to a mode of treatment widely different, and in many cases the exact opposite of what has

hitherto been pursued in such cases, where the cardiac lesion has been overlooked as the cause of the cerebral affection, or even where it has been recognized, but has been considered to have acted differently from the way in which we have now described.

As we fully admit that serious cerebral mischief will result, and has been proved in many instances to have resulted, from an hypertrophied left ventricle impelling the blood with undue force to the brain, a first point in all these cerebral affections, whether of apoplexy or paralysis, ought to be, to determine the actual state of the heart, if it be in a normal healthy condition; and if not, in what its deviation from such state consists. If it be in a hypertrophied condition, we have physical signs to declare it to us. If this hypertrophy depend upon an obstruction to the course of the blood interposed between the heart and the origin of the vessels which convey the blood to the brain, whether this obstruction reside in the mitral valve or in the sigmoid valves of the aorta, the characteristic signs of these respective lesions will be present, and will serve to guide us. The pulse, especially, will yield us most valuable information. In cases of aortic valve disease, it will have the peculiar vibrating, jarring character which we have already noticed, and will also be visible in the longer arteries; while in mitral valve disease it will be small, and even sometimes be altogether absent, and never in proportion to the strength of the heart's action: whereas if the obstruction and consequent cause of the hypertrophy be more remote than the origin of the vessels leading to the head, the same impulse, which forcibly drives the blood to the brain, will be communicated to the vessels leading to the wrists and constituting the pulse. Here the force of the pulse is a measure of the impulse to the brain. In no case of apoplexy or paralysis should a careful examination of the heart's action be omitted. When we find a full, strong pulse, with an equally strong action of the heart, attended with marked impulse, or shock, we may calcu-

late upon that modification of this complication of cerebral and heart disease which has been so long noticed. And to the treatment in this case, we have only to repeat what we have remarked in a former number of this Journal, that while such an affection as apoplexy, and under such circumstances, demands the most untemporizing practice, yet the extent to which depletion should be carried has its limits; for we have not unfrequently met with cases in which a large abstraction of blood has been followed by a collapse or failure of innervation, which required to be immediately met by stimulants.*

* At a late meeting of the Pathological Society, Mr. Carmichael made some judicious observations on the practice of copious bleeding, in cases of sudden apoplectic seizure. The occasion of Mr. Carmichael's making these observations, reproaching the indiscriminate practice, was in bringing before the Society a case of sudden death of a Presbyterian clergyman, beyond the middle period of life, who had just performed the marriage ceremony, and while at breakfast fell lifeless. The suddenness of the death led to the suspicion of its cause being either in the heart or larger blood vessels. Examination of the body discovered the muscular substance of the heart completely converted into fat. The respected individual, during life, often complained of præcordial oppression, and was subject to fainting; to avert which he constantly kept within his reach some stimulant, such as Madeira wine, although a man of rigidly abstemious habits. Mr. Carmichael attributed the death in this case to cerebral congestion, consequent on the inability of the right ventricle to propel the blood through the lungs; and therefore commended the effort that had been made to save life, by opening the jugular vein, and thus more directly relieving the congestion; rather than by adopting a mode of depletion, which, by weakening the system generally, would have rendered the right ventricle still less able to propel the blood through the lungs, and so rather augment than diminish the congestion. We saw the cause of death in a different light from Mr. Carmichael, considering it to depend not on the congestion, as the symptoms were not indicative of congestion, but upon the failure of the power of the left ventricle to propel the blood to the brain, and the consequent failure or suspension of innervation. It was a disposition to this of which the patient complained during life, and against which he sought and obtained relief from stimulants. When we consider what syncope or fainting consists in, that it is a sudden loss of sensation and motion, caused by the cessation or great weakening of the circulatory movement conducting the blood to the brain, do we not find its exact conditions fulfilled in the case in question? The state of the left ventricle was such as to render it an unfit instrument to deal out to

We shall not enter into the detail of the treatment of the cerebral affection dependent on the disease of the heart, under these circumstances, as it is now a new point of pathology ; we only ask that due discrimination be exercised, to distinguish between it and the cerebral affection dependent upon the other cardiac lesions to which we have alluded.

We have little to add to what we have already stated of disease of the brain, produced by disease of the aortic valves. Quite adopting Dr. Corrigan's views of the treatment and management of the cardiac lesion, from our practical experience of it, and from our theoretical views of its nature, and its close analogy of physical signs and constitutional symptoms with hæmorrhage, we have employed in it a tonic mode of treatment, especially so when the cerebral was added to the cardiac lesion. Observing, as we before remarked, a close relation of signs and symptoms not only between this heart affection and the physical signs and symptoms of hæmorrhage, but also between it and those diseases whose essence seems to consist in an imperfect state of the blood, and in whose treatment we find chalybeates especially beneficial, we selected our tonics from this class of remedies, and we conceive with some advantage. When the cerebral affection co-existed, we united the treatments suited to the complication. We found the cerebral affection to require an occasional carefully modified depletion, which generally consisted in a few leeches applied behind the ears. We also employed blisters to the nape of the neck ; foot-baths, with mustard.

the brain the fluid, upon whose constant supply, as a stimulus, depended the function of this organ, as the source and centre of innervation. But we may be told that this condition of the ventricle was no new thing. That is true ; but the occasion was one in which the feelings of the individual were very deeply engaged ; and we may remark, that a comparatively slight cause will be competent to produce death, when it acts upon an organ whose integrity has been already infringed on to an extent barely consistent with life. While we agree with Mr. Carmichael that a full depletion is injurious in such cases, our rationale of the reprobation of the practice differs from his ; his having respect to the right ventricle, ours to the left.

Although the patient's flushed face generally suggested to us the necessity of these occasional means, yet we generally depended more on the state of the speech, which seemed to us to yield more certain indications. Our constitutional treatment, contemplating both organs, consisted in tonics and stimulants, united to other means, which the individual organs interested in the complication seemed to require. The indications were to impart habitual strength to the heart, to enable it to propel the blood, as well as to sustain its regurgitation, and also to stimulate it. We also had to provide for the cerebral affection. We before remarked that we selected our tonics from among chalybeates, with which, as in the case of Dooley, we associated, but very sparingly, digitalis. The stimulants we employed were camphor, ammonia, infusum arnicæ, our hospital formula of cardiac mixture, composed of camphor mixture, carbonate of ammonia, and Hofman's anodyne, &c. &c. We combined James's powder, (as recommended by Dr. Cheyne in cerebral affections,) with carbonate of ammonia. But the combination which seemed to us especially useful in these cases was that of James's powder and extract of nuxvomica; the former ingredient by determining to the surface, producing an equalization of the circulation, while the latter stimulated the heart, as a muscular organ.

The indications, where the cerebral lesion depends on an affection of the mitral valve, are nearly the same as when it depends on the aortic valves, except that when the mitral valve is affected, physical motions and moral emotions must be equally avoided, as producing that tumultuous action of the organ, and causing those congestions upon which depend the exacerbations to which this affection is so subject.

There are two conditions of the auriculo-ventricular opening in these cases—one consisting in its permanent contraction, the other in its permanent patency. In the one but a small quantity of blood passes from the auricle into the ventricle, and of that small quantity a good deal passes back into the auricle again; in the other there is a free passage to the blood from the auricle

into the ventricle, and nearly an equally free one from the ventricle back into the auricle. The effect is nearly the same in both cases. The system is equally deprived of its due quantity of blood, while there are the same congestions in the heart itself and in the lungs. While the habitual treatment consists in the exact opposite of that which experience has proved salutary in aortic valve disease, in physical and moral quietude, we shall have to meet the tendency to syncope and failure of nervous energy by the same stimulants as in the other modification of the disease. My friend Mr. Fleming communicated a most interesting case, upon the subject, to the Pathological Society. It was that of a gentleman, aged about 45, who first complained that he was suddenly seized with dyspnoea at night, and had palpitation. Mr. Fleming had seen him for some time, when he was sent for in great haste to see him, as he had been seized with what was supposed to be an apoplectic fit. He found him in a state of unconsciousness, with a pulse scarcely perceptible, and perceived that he had hemiplegia. He directed his feet to be put into warm water, with mustard, ordered camphor and ammonia, and a blister to the nape of the neck. By these means, in five hours, and of course before the blister had taken effect, he quite recovered. Between March and November he had four different attacks, all of the same nature, and all treated, and successfully treated, in the same way. All the attacks were attended with jaundice. Mr. Fleming found the necessity of insisting upon the most perfect quiet of both mind and body. The heart's action was very strong with impulse, and had a *bruit de soufflet*, while the pulse was very small and feeble, and sometimes not to be felt. The slightest depletion, even a single leech, produced alarming weakness. There was an extreme susceptibility of the effects of opium.

The gentleman's death, caused by another disease, afforded Mr. Fleming an opportunity of examining the state of the organs of the chest, but unfortunately not of the head. He found the mitral valve of the heart thickened in its structure, and quite

insufficient to close the auriculo-ventricular opening, which was much larger than it should have been. There was eccentric hypertrophy of the left ventricle. The lungs were congested, and in parts exhibited portions of pulmonary apoplexy, and were partially emphysematous. It is matter of regret that the examination of the head could not have been obtained, to ascertain in what state the brain was. Whether there was permanent lesion of the brain or not, is not very material; it proves, at least, how lesion of the heart will influence the circulation to the brain to such a degree as to cause the suspension of the function of the latter organ, to the almost complete, if not to entire destruction of life. Mr. Fleming evinced a sound judgment in the exhibition of stimulants, guided by the weak, faltering pulse, and regarding the symptoms as dependent on the brain being deprived of its proper stimulus. Although we regard this as the main feature of the case, yet we believe the congestion of the brain to have had some share in it. In some of the attacks Mr. Fleming gave brandy, and with great relief.

The conclusions we deduce from the foregoing observations are :

1st. The pathology of the brain is in many instances intimately connected with, and dependent upon, pathology of the heart.

2nd. To limit the pathological relation existing between these two important organs to apoplexy, the result of hypertrophy of the left ventricle of the heart, is to narrow it much within its true limits.

3rd. Ramolissement of the brain occurs in connexion with diseases of the heart, whose effect is either directly or indirectly to diminish the flow of blood to the head.

4th. This cerebral lesion may be connected with either disease of the aortic or mitral valve.

5th. Hypertrophy of the left ventricle of the heart, in order to produce apoplexy, must depend upon some impediment to the circulation, placed at a greater distance from the heart

than the origin of the vessels which convey the blood to the brain.

6th. When ramolissement of the brain occurs, in connexion with an imperfect or patulous condition of aortic valves, the close analogy that we trace between the physical signs and constitutional symptoms of this lesion and hæmorrhage, as well as the results of treatment, render it very improbable that the disease of the brain is the result of too much blood driven to it, and with undue force.

7th. When ramolissement of the brain occurs, in connexion with disease of the mitral valve, the state of the pulse, which, as a diagnostic mark of this lesion, is habitually small, precludes the idea that the cerebral lesion is produced under the usual conditions of inflammation.

8th. While ramolissement of the brain occurs as a result of inflammation, hyperemia, &c., it occurs also under diametrically opposite circumstances.

9th. To confound such opposite modifications of disease, and to apply to them the same treatment, must necessarily lead to the most mischievous practical results.

10th. The circumstances under which we have seen ramolissement of the brain to take place, seem to identify it with gangrene, or death of a part consequent upon a diminution of its due supply of blood.

ART. XII.—*Contributions to the History of Medicine.* By
AQUILLA SMITH, M.D., Fellow of the College of Physicians,
M. R. I. A.

[Read at the Evening Meeting of the College of Physicians, in the College Hall,
on Monday, the 20th of January, 1840.]

ASSUMING that it will be generally admitted that the author who first publishes his opinions or experiments, is justly entitled to the merit of being considered the original discoverer; I

propose to submit to your consideration a few facts, chiefly relating to the right of priority of discovery in some matters connected with the history of medicine.

My observations shall be altogether regulated by the dates of the respective publications from which I intend to draw my illustrations, and these, I may observe, are not the fruits of any extensive research into the history of medicine in general, but rather the result of a very casual acquaintance with the writings of some authors, whose works are now generally unread, if not forgotten. Nor do I presume to say that in any instance, I have discovered the original author of any opinion or experiment, but content myself with making one step, at least, towards the attainment of that object.

In questioning the claims of authors to originality, if I thought my remarks would attach any imputation to the characters of my predecessors, to whom I may have occasion to allude, or in any manner tend to hurt the feelings of my cotemporaries, I should not appear before you on the present occasion.

The illustrious Haller, after having examined the claims of Harvey's predecessors, to the discovery of the circulation of the blood, makes the following remark :

“*Præterea æquo animo oportet expendisse, non eum verum inventorem esse, cui vaga aliqua cogitatio elapsa est, in nullo fundata experimento, sed eum omnino eam laudem mereri, qui verum ex suis fontibus per sua pericula, suasque meditationes eruerit, et adeo firmis rationibus stabiliverit, ut veri cupidos convincant.*”*

Guided by the principle so well expressed in the foregoing quotation, I shall restrict myself to the statement of facts which may be compared, but cannot be doubted.

ON THE GROWTH OF BONE.

Few men perhaps have more ably sustained their claims to originality of mind than the celebrated John Hunter ; yet, not-

* Haller, *Elementa Physiologiæ*, tom. i. lib. 3, p. 247, 4to.

withstanding his high, and well-earned honours, I feel no reluctance in claiming the right of priority of an important discovery in physiology, for an eminent natural philosopher, the Rev. Stephen Hales, who has been characterized by Haller, as "pious, modest, indefatigable, and born for the discovery of truth."

Mr. Hunter, in his "Lectures on the Principles of Surgery," states that "bones do not grow by having new particles put into the interstices of previously formed parts, so as to remove these to a greater distance from each other, by which means they should grow larger,—as, for instance, if I put a sponge into water, the water getting into all the interstices makes it larger,—but they grow by the addition of new bone on the external surface." And in proof of his assertion mentions the following experiment: "I took a pig of a very large breed when young, *bored two holes in the tibia*, and put a shot into each, measuring on a card the distance of each from the other, I allowed this pig to grow up to its full size, then killed it and took out the bone, and I found the two holes exactly at the *same distance* from one another as at first. Now if the bone had grown in all its parts, those two shot would have been removed to a distance from each other, proportionate to the growth of the bone."^{*}

The ingenious Dr. Hales, from the result of his experiments on the growth of vegetables, concludes that "as in vegetables, so doubtless in animals, the tender ductile bones of young animals are gradually increased in every part, that is not hardened and ossified; but since it was inconsistent with the motions of the joints to have the ends of the bones soft and ductile, as in vegetables, therefore nature makes a wonderful provision for this at the glutinous serrated joining of the heads to the shanks of the bones; which joining, while it continues ductile, the animal grows; but when it ossifies, then the animal can no longer grow :

^{*} Hunter's Works, by Palmer, vol. i. p. 253.

as I was assured by the following experiment, viz. I took a half-grown chick, whose leg-bone was then two inches long; and with a sharp-pointed iron, at half an inch distance, I *pierced two small holes thro' the middle of the scaly covering of the leg and shin-bone*; two months after I killed the chick, and upon laying the bone bare, I found on it obscure remains of the two marks I had made, at the *same distance* of half an inch: so that that part of the bone had not at all distended lengthwise; since the time that I marked it; notwithstanding the bone was in that time grown an inch more in length, which growth was mostly at the upper end of the bone, where a wonderful provision is made for its growth at the joining of its head to the shank, called by anatomists symphysis.*

A brief recapitulation of the words of the respective authors, will prove the identity of the two experiments. Mr. Hunter *bored two holes in the tibia, or shin-bone* of a young pig, and found them at the *same distance* when the animal was full grown. The Rev. Mr. Hales *pierced two small holes in the shin-bone* of a half-grown chick, and two months after, when the bone had increased an inch in length, he found remains of the two marks at the *same distance*.

Having now shown the identity of the two experiments, and the inferences deduced from them, the right of precedence in this important discovery in physiology must be awarded to the Rev. Mr. Hales, for Mr. Hunter was not born until 1728, the year after the publication of the Statical Essays from which I have quoted. Yet, notwithstanding this irrefragible proof in favour of Mr. Hales, as the original discoverer of the fact, I am disposed to acquit Mr. Hunter of plagiarism, for had not the experiment originated with himself, he would scarcely have attempted to appropriate the facts and inferences of Mr. Hales, who was for some years his cotemporary.

* Hales's Statical Essays, vol. i. p. 337-8, 8vo. Lond. 1727.

ON MERCURIAL FUMIGATION.

In a Treatise on the Venereal Disease, by a distinguished surgeon, recently published, we are informed that “the process of fumigation may be conducted in an easy and comfortable manner, by directing the intended dose of *cinnabar*, or grey oxide of mercury, to be mixed with melted wax, and with a cotton wick be moulded into a small candle. This may be stuck on a common plate, and then burnt under a curved glass funnel, which is to be raised about an inch from the plate.”*

Whether this ingenious and elegant mode of administering mercury, by which its complete volatilization is so well effected, was invented by the author, we are not informed; this, however, is not a matter of any moment, for we find that Rondeletius, who flourished at Montpellier, about the middle of the sixteenth century, used the very same means in applying mercurial fumigation.

Riverius, in his chapter “*De narium ulcere et ozaena*,”† informs us that “*Rondeletius ad ulcera exsiccanda, post sufficientem detersionem, nihil efficacius esse testatur suffumigio, quod partes illas profundas attingit et siccatur; idque parandum esse docet ex potentissimè resiccantibus, ut auripigmento et cinnabari, quibus addenda sunt aliqua odorata, ex quibus fuligo excitatur.*”

He then gives the formula, and adds, “*optimum etiam est parare candelas ex cera rubra; nam fuligo talis candelæ narium ulcera potenter exsiccatur, maximè si æger contineatur in cubiculo benè clauso et angusto.*”

And in testimony of the efficacy of this plan, he quotes the following words of Rondeletius, “*hac ratione ulcus curavimus, quod neque Italici, neque à Gallis medicis, curari potuerat.*”

* Colles on the Venereal Disease, 6vo. 1837, p. 58-9.

† Lazari Riverii, *Praxis Medica cum Theoria*, Lugduni, 1663, folio, p. 73.

From the foregoing extracts, it is very evident that the "candelas ex cera rubra," consisted of "cinnabar mixed with melted wax."

THE INFLUENCE OF ATMOSPHERIC PRESSURE ON THE CIRCULATION.

In the year 1826, the late Sir David Barry published his "Experimental Researches on the Influence exercised by Atmospheric Pressure upon the Progression of the Blood in the Veins," and from several ingeniously devised experiments drew the following conclusions.

First. That the blood which runs contrary to its own gravity arrives at the heart only during inspiration.

Secondly. That the power which impels it at this moment through the veins, is atmospheric pressure.

Sir David Barry is, I believe, justly entitled to the merit of having been the first to demonstrate, by experiment, the mechanism of the agency of atmospheric pressure on the veins, and I should not feel warranted in questioning his claims as a discoverer, in any respect, were it not for an opinion which he has advanced, concerning the originality of the hypothesis of the agency of atmospheric pressure on the venous circulation. At page 4, he tells us that "the doctrine of the active resiliency of the lungs tending constantly to leave a vacuum between the surface and the parietes of the thorax, and thereby assisting to bring uninterrupted atmospheric pressure upon the blood in the veins, was first broached by Dr. Carson of Liverpool, in 1815."

I shall now quote a passage from the preface to the works of Dr. John Huxham, of Plymouth, published in the year 1788, and which appears to have been altogether unknown to Sir David Barry.

"First then, let us consider the air as a heavy circumambient fluid, perpetually pressing upon us; so that a man of a middle stature sustains from it no less than a weight of 32,000lbs.,—I think, indeed, this very pressure doth not a little contribute to keep on the circulation of the blood,—for as the whole body is

continually compressed by the incumbent atmosphere, it *must* force the blood through the veins towards the heart, seeing it cannot run back by a retrograde motion into the arteries, on account of the valves that are found up and down in the veins. So little indeed, of the original motion, impressed by the heart on the blood, remains in the larger veins, that it would scarce mount from the feet to the heart, unless to preserve, as it were, an equilibrium in the veins and arteries, which being contiguous, form a kind of inverted syphon, whose legs are of equal altitude. So slow truly is the progress of the blood in the veins of the limbs, that many valves are placed in them to take off the weight of the superincumbent blood, lest it should slide back towards the extremities.—It seems, therefore, by its mere motion in the veins, not capable of overcoming the constrictive power of the heart, and forcing into the ventricle, so as sufficiently to dilate it.—The perpetual pressure, therefore, of the atmosphere, adds to the momentum of the blood, acting as a kind of antagonist against the innate and strongly constrictive power of the heart, which is more or less the natural faculty of every sphincter muscle.—For as soon as the lungs, expanded by inspiration, make room for the blood issuing out of the heart into the empty blood-vessels of the lungs, (a kind of momentary vacuum being made in them by the expanse of the lungs,) the heavy atmosphere, constantly compressing the whole habit of the body, forces as much blood into the right ventricle of the heart as it can well receive, whilst at the same time the elastic air, rushing through all the lungs, and pressing on all its blood-vessels, adds no small degree of force to the very rapid currents of blood, which are observed to be here vastly much swifter than in any of the branches of the aorta; (See Hale's *Hæmastaticks Experiment*, X. ;) so that by this means the momentum of the blood is so much increased, as to force into the left ventricle of the heart." And he further observes, "I only would here by the way take notice, that the pressure of the atmos-

phere is one, out of many, and that too not a contemptible one, of the causes of the circulation of the blood, and to hint, at the same time, how much the gravity of the air may promote, and its levity retard it.”*

A brief summary of Dr. Huxham's opinions will shew to what extent he understood the mechanism of the circulation, and also how far he anticipated in theory the discoveries published by Sir David Barry.

The Doctor informs us,

1st. That the atmospheric pressure contributes to keep on the circulation of the blood, and that it must force the blood through the veins towards the heart.

2ndly. That the power of the heart is very feeble in promoting the venous circulation.

3dly. That the blood, by its mere motion in the veins, is not capable of dilating the heart sufficiently.

4thly. That a momentary vacuum is made in the lungs by the act of inspiration.

5thly. That the atmosphere acts at the moment of inspiration, and forces the blood into the right ventricle.

Lastly. That the pressure of the atmosphere is not a contemptible cause of the circulation of the blood.

Thirty-six years after the publication of Dr. Huxham's complete works, from which I have quoted, and seventy-four years after the date of the second edition of his “*Observationes de Aëre*,” in which I find the same opinions at page vii. of the Preface, Sir David Barry (in page 5 of his Memoir) tells us “he had long remarked, in every thing he heard or read on the circulation of the blood, that the pressure of the atmosphere was either entirely left out, in the enumeration of its causes, or considered as merely a secondary agent;” and (at page 35) draws the following conclusions :

* Huxham's Works, vol. i., Preface, pp. ix.—xi. 8vo. Lond. 1788.

1st. That the blood arrives at the heart only during inspiration.

2ndly. That the power which impels it at this moment through the veins is atmospheric pressure.

It is hardly necessary to point out the identity of these conclusions with those of Dr. Huxham ; and I may now assert that Sir David Barry can only be entitled to the merit of having rediscovered, and illustrated by experiment, the opinions which the Doctor expressed, in language not to be misunderstood, so far back as the year 1752.

As my object is solely to inquire who was the first to publish certain opinions or experiments, I shall only notice one more of Sir David Barry's conclusions. At page 38 he observes, "It being now evident, from every thing that has been said, that the blood in the veins is placed under the influence of atmospheric pressure, it would be curious to trace the connexion which appears to exist between disease generally,—intermittent fever, for example,—and the daily barometric variations."

The agency of atmospheric pressure here alluded to was clearly recognized by Dr. Huxham ; but as his reasoning on this subject would be too long to quote, I must refer to the xii. and xiii. pages of the Preface to his works, and I shall only remark that he mentions intermittent fever as one of the diseases likely to be influenced by barometric variations.

ON TEACHING ANATOMY IN AMERICA.

In the first number of the "New York Quarterly Journal of Medicine and Surgery," published in July, 1839, Dr. Watson has given a very interesting "Summary View of the Progress of Medicine in America," in which he informs us, that "among the earliest cultivators of medical knowledge in New England, were, Hunter, Walton, Douglas, and Boylston. Dr. William Hunter, a pupil of the elder Monro, lectured on anatomy at Newport in the years 1754-5-6 : his were the first

lectures on subjects connected with the profession in America."*

Had I not seen Dr. Watson's paper, I should have claimed the honour of having taught anatomy for the first time in America, for a countryman of our own and a Fellow of the College, within whose walls we are now assembled. I allude to Dr. Samuel Clossy, who in the year 1761 was physician to Mercer's Hospital, in this city. About the year 1762 he emigrated to America, and on the 25th of November, 1763, he commenced a course of forty-four lectures on anatomy, in a store-house at New York; and in 1764 he gave an account of his progress, in a letter to his friend, Dr. George Cleghorn, a distinguished practitioner, who had settled in Dublin about the year 1751.

Although Dr. Clossy was not the first public teacher of anatomy in America, he was one of the earliest cultivators of that branch of medical science in the new world; and as Dr. Watson does not appear to have been aware of the fact, I shall now read a copy of the original letter; which is preserved in the library of the Royal Irish Academy, among the papers of the Medico-Philosophical Society of Dublin, in a book called the "Repository," No. 85.

(COPY.)

"From New York.

"To Mr. Cleghorn.

"DEAR SIR,—I am extremely obliged to you not only for the receipt for making bones transparent, but for your very elegant manner in delivering it us in your own hands.

"You must know that, finding my friends partly out of favour when I got here, I found I must do something more than common. Lectures in anatomy occurred, and I accordingly began the 25th of November, having first hired, as it were, a store-house. I procured first a female who died of inflammation of the bowels, (a disorder very common in this

country,) and began (because I had no bones to begin regularly) with the muscles of the lower belly, and in succession went through the contents of this cavity; the contents, then of the chest; and ended my first part with the encephalon and its membranes, explaining every evening the structure as fibrous, vascular, and nervous, and every succeeding evening their uses, motions, and diseases. Part the second, began with a black female, on which I went quite through the muscles, except those of the uvula, which I could not find, partly from want of due experience, and partly from the foetor of the subject. Part the third, I could not complete, for want of a young subject, (for by this time myself and myrmidons were so known in the place, that we could not venture to meddle with a white subject, and a black or Mulatto I could not procure,) so that I ended in forty-four nights, speaking as freely as if I had been a lecturer for years.

"The first subject was white and about twenty, and, as I said, died of an inflammation in the stomach and intestines. The stomach was almost black with blood extravasated into the interstices of its fibres; the small intestines quite black, putrid, and dry.

"The second subject, a female black, had a very large polypus in the right ventricle, running into the pulmonary artery, keeping open the valves; there was another also in the left auricle and ventricle; they were as much flesh as the heart itself, and about the thickness of my middle finger. The whole system of veins were exceedingly enlarged and turgid; the whole system of muscles red as scarlet, the consequence of these obstructions in the heart; but one thing singular was the beautiful carving on the neck, breast, and belly, which 'tis impossible to describe verbally—hieroglyphics, possibly, of the kingdom of Angola. Since then, I dissected a male black, for the sake of the skeleton: he belonged to a friend of mine, and died of gripes and a jaundice. In the lower belly I found the small intestines pale, yellow, carneous; thick as the colon; the diameter of my

little finger, and filled with nought but yellow bile ; the gall bladder very large and turgid, with green bile ; and what (at first) seemed to me very singular, the blood flowed from the small arteries as well as veins, full as fluid as warm oil. Boerhaave is therefore in the right, that the human bile will dissolve its own blood. Lastly, you'll observe, my dear sir, that this negro was circumcised—a custom (as I am informed) of the natives of Angola. The whole system of muscles was so loose and dissolved, that you might pull them asunder with mere handling. I took this opportunity, too, of shewing the ligaments of the articulations, with the membranes of the bones and their shape, in the fresh subject: you would be amazed to see with what delight it was received.

“ Would you choose to know any thing of this place, I shall take a very great pleasure in acquainting you therewith. Rogers hearing of me at the Annadago falls, has wrote to me ; he is ordered even to the wild Detroit, at a time when he expected to get home. Such is our situation and comfort. Pray give my love to the Club, and if you think proper you may lay these observations before them. I am, very dear sir, with my hearty good wishes for yours and their welfare, your friend and, hey ! ho ! your transported servant;

“ SAM. CLOSSY.”

This letter is without date, but I find in the Minutes of the Medico-Philosophical Society that it was read by Dr. Cleghorn, at a meeting held on the 1st of August, 1764. We may presume that Dr. Clossy acquired some distinction as a teacher, for we learn from Dr. Watson that he was appointed Professor of Anatomy in the first medical school established in America, at New York, in the year 1768.

ON THE MODE OF APPLYING BLISTERS.

Dr. Williams, in the article “Counter-Irritation,” in the “Cyclopædia of Practical Medicine,”* says that “the means to

* Vol. i. p. 487. col. 2.

avoid the irritating effects of absorption from a blister, may pretty effectually be obtained, by interposing a piece of gauze on muslin moistened with oil, which, being a menstruum of the blistering principle, transfers its effects to the skin, whilst the gauze or muslin prevents the particles of the fly from adhering to the skin, after the separation of the cuticle has rendered it an actively absorbing surface."

The introduction into practice of interposing a substance between the blistering plaster and the surface to which it is applied, with the view of preventing "the long-continued irritation that portions of the cantharides produce by sticking to the part," is attributed by my friend, Dr. William Stokes, to M. Brettoneau, a distinguished French physician of our own times.*

I cannot allow the merit of this practice, trifling as it is, to be bestowed on a foreigner, while I know that we owe the discovery of the principle just alluded to, and the application of it, by means almost identical with those described by Dr. Williams, to a countryman of our own, Surgeon John Sproull, who practised in the town of Strabane some time previous to the year 1775.

In a rare little book, entitled, "The Medical Review, a Poem, being a Panegyric on the Faculty of Dublin; Physicians, Surgeons, and Apothecaries, marching in Procession to the Temple of Fame; by John Gilborne, M.D.; Dublin, 1775;" at page 46, line 759, the following verses occur:

"*John Sproull, chirurgene of fair town Strabane,
Cautious, defends the patient's back with lawn,
Before he lays his epispaſtic on,
To keep the blister whole, not let it run.
Cambric or lawn on ſuch occasions wear;
'Tis better clip your ſkin than rudely tear;
The force of the cantharides gets thro',
And in a gentler manner comes to you.*"

* Cyclopædia of Practical Medicine, vol. i. p. 525, Art. Derivation.

In the advertisement to this poem we are informed that it was written in the year 1774, and that the design of the author was "to celebrate the names of the learned and worthy men who practise in our time the several branches of the healing art in our metropolis, and some parts of the country of Ireland where the author has been conversant."

I have now concluded my notice of these few facts; and notwithstanding the frequent references I have made to authors whose works are too generally considered obsolete, I do not mean to advocate the utility or advantages of devoting too much time to the perusal of such works, yet, at the same time, I must say that the medical men of the present day are not usually as well acquainted with the writings of their predecessors as, in my opinion, they should. The author of a very popular literary miscellany tells us, that "to know and admire only the literature and tastes of our own age is a species of elegant barbarism;" and I shall conclude by recommending to my professional brethren, in particular, a piece of advice to which I have been indebted for the recollection of whatever is interesting in this communication :

" In reading authors, when you find,
Bright passages that strike the mind,
And which, perhaps, you have reason
To think on at another season ;
Be not contented with the sight,
But take them down in black and white."*

ART. XIII.—*A Case of General Hydrophthalmia, and also one of Retinitis of both Eyes, successfully treated by Mercury, with Observations.* By JAMES O'BEIRNE, M.D., Surgeon Extraordinary to the Queen, one of the Surgeons of the Richmond Surgical Hospital, Dublin, &c.

[Read at the Surgical Society of Ireland, on the 29th of Feb. 1840.]

I.—*Case of Hydrophthalmia.*

MARY ANNE REDMOND, aged 40; robust, much exposed, as a hawker of small-wares, to vicissitudes of weather, and subject to attacks of cold, which “took her with pains in the bones,” admitted into the Richmond Surgical Hospital, under my care, on the 24th of September, 1839, with considerable enlargement and protrusion of the globe of the right eye, and total loss of vision of that organ.

She states that, on the night of the sixth of January last, a window of the room in which she slept was forced in by the storm; that she contracted a severe cold on that memorable occasion; that the affection of the eye commenced soon after with severe pain in the right eye-ball, and right supra-orbital region, followed by vivid redness of the organ; that this pain became excruciating at night, that, after continuing for several days, she lost it suddenly, and, about the same time, had the distinct sense of moderate enlargement and distention of the globe; and that the enlargement proceeded slowly, and loss of vision gradually increased, until an hour before her admission into hospital, when she suddenly observed that she was, to use her own words, “completely dark of the bad eye.”

The present state of the affected eyeball is as follows: Examined in profile, it is completely uncovered by the upper eyelid, and projects considerably more than the sound one; it is equally distended in its entire circumference, and its sclerotic portion has a bluish cast, and appears as if thinned;

the relative distance between the anterior and posterior chambers is preserved. The cornea is not altered in figure, and in size bears a just proportion to that of the rest of the ball. The iris is of its natural colour, and does not project more than usual into the anterior chamber. The pupil is greatly dilated, quite motionless under the stimulus of light, and somewhat irregular at its upper margin. There is slight conjunctivitis, but a greater degree of it at the inner canthus. The lens and all the humours are perfectly transparent, but the bottom of the eye, contrasted with that of the sound one, bears a dark, blackish appearance. The eyelids are neither cedematous nor inflamed, and leave the eye perfectly uncovered. The motions of the eye-ball are not perfectly under the control of the will, and are performed with some degree of pain and difficulty.

The patient is free from all symptoms of constitutional disturbance, but complains of the total loss of vision, and painful sense of distension of the affected eye. Ordered to take a pill, containing three grains of calomel, and half a grain of opium, three times in the day; to have five leeches applied to the upper eyelid, the same number to the lower, and to be placed on low diet.

5th October. The pills have been repeated daily, until the mouth became sore, and, the conjunctival inflammation having continued, leeches have been applied three times, in relays of ten at each time. She has now a certain degree of vision of the affected eye, and the size of the eyeball is considerably less. A blister ordered to be applied to the nape of the neck.

15th. The mouth has been affected until within the last three or four days. The globe of the eye is very remarkably reduced in size, and vision greatly improved; but single objects appear doubled. There is slight strabismus, the axis of the globe being directed upwards and inwards. Ordered to have a small blister applied above the middle of the right supercilium, and to take an ounce of infusion of valerian three times in the day.

25th. Vision greatly improved. Strabismus very slight. Ordered, an acetate of lead lotion to be applied to the eye, and another blister to be placed over the supercilium.

November 10th. Vision perfect, eye of the natural size and appearance. Complains to-day, for the first time, of pain in the right elbow, which is red, swollen, and gives to the feel a sense of fluctuation. Ordered, the pills of calomel and opium to be used as before, and the posterior aspect of the joint to be covered with a blister.

16th. Under the above treatment, the affection of the elbow disappeared in the course of three or four days. But the right knee-joint has also become very red, painful and swollen, and there are evidently extensive synovitis and bursitis of the joint. There is no pain on pressing the articular surface together, and scarcely any at night. Ten leeches to be applied to the knee, and the joint to be fomented with a decoction of poppies.

21st. Knee free from pain and redness, but still considerably swollen. The pill of calomel and opium to be repeated, and the joint to be covered with a blister.

December 1st. The mouth has been again affected, but slightly, and continued so for a few days. The knee-joint is now in its natural state, so is the affected eyeball, and its vision is as perfect as ever it was. Ordered, purgatives and warm baths occasionally, and to have full diet.

Discharged cured on the 14th December, 1839.

Observations.—What was the nature of the ophthalmia with which this woman was affected, soon after exposure to cold on the night of the great storm? Although she was not seen for more than seven months after that period, it appears to me that this very leading point may be satisfactorily determined. In this case we see, first, that, previous to either the storm or the attack of ophthalmia, the patient had been exposed to every vicissitude of weather, and subject to “pains in her bones;” secondly, that almost immediately after the hydrophthalmia had been removed, the right elbow-joint became attacked with

inflammation; and that this was no sooner removed, than the right knee-joint became similarly attacked, just as occurs in cases of metastatic articular rheumatism. These facts seem to leave no doubt of the patient having been a rheumatic subject, when she was attacked with ophthalmia. Again, we know that, in such patients, the fibrous structures are more likely than any other to become affected from such a cause as exposure to severe cold; and that inflammation of these structures frequently terminates, and relieves itself, as it were, by the effusion of either a serous or a synovial fluid, according, it would seem, as the affected fibrous tissue may happen to be connected with a serous or a synovial membrane. Hence, I infer that the form of ophthalmia with which she was first attacked, was sclerotitis or rheumatic ophthalmia; and that this ultimately terminated by serous effusion into both chambers of the affected eye. The correctness of this inference is confirmed by the fact, that, at the period in question, the patient suffered those agonizing nocturnal pains in the eyeball and circumorbital regions, which invariably attend, and, in a great measure, characterize sclerotitis. It is strongly supported, also, by the circumstance of the patient having been considerably relieved, when, at a later period, the enlargement of the eyeball commenced. Lastly, two facts of another description deserve attention. They are these: hydrophthalmia has never been known to affect both eyes at once; and metastatic rheumatism rarely, if ever, affects more parts than one, at one and the same time. Such a peculiarity being common to both, seems to show that these affections stand more frequently to each other in the relation of cause and effect, than is generally supposed.

In advancing this view of the present case, I am fully aware that Beer has omitted to mention rheumatism among the various constitutional causes of hydrophthalmia; and also that the experience of Mr. Lawrence, Mr. Middlemore, and others, is strongly opposed to the constitutional origin of the disease, or its being in any way connected with metastasis.

But I find that my view of the case is borne out by the experience of an equally eminent ophthalmologist, Juengken, who enumerates rheumatism and metastasis amongst the constitutional causes of the malady. Facts, however, are things too stubborn to be suppressed by the voice of any authority, however high.

2. In the treatment of the three varieties of hydrophthalmia, Celsus, Nuck, Woolhouse, Heister, Sabatier, Scarpa, Lawrence, Demours, Mackenzie, Middlemore, and, in short, all writers on the subject, recommend either paracentesis of the cornea, or of the sclerotic portion of the eyeball, or excision of the cornea, according to the variety to be treated, and the increase of size at which the eyeball has arrived. In fact all ophthalmologists concur in the opinion that one or other of these operations is unavoidable. Yet, in this case, the enlarged and distended eyeball returned to its natural size, and a complete cure was effected, without the aid of either paracentesis, excision, or any surgical operation whatsoever.

3. In that invaluable and truly wonderful work, the Surgical Dictionary, its author, faithfully reflecting the opinions and practice of all ages, speaks thus: "in hydrophthalmia, the prognosis is generally unfavourable, and when the sight is nearly or quite lost, scarcely any hope can be entertained either of restoring vision or preserving the shape of the eye." Yet, in this case, vision, although totally lost, was perfectly restored; and the eyeball, although considerably enlarged, resumed its natural size and shape.

4. In the work just mentioned, Mr. S. Cooper says: "Beer has known great benefit sometimes produced by the submuriate of mercury, combined with digitalis, and a drink containing supertartrate of potassa, and borax." In this passage we see that Beer used mercury in this disease as a sialogogue, and in no other way; and that he speaks of its use, in that form, merely as greatly benefiting, not as curing the disease. Another passage from the same work runs thus: "At the first appearance of dropsy of the eye, many surgeons recommend mercurials, and

cicuta ; astringent collyria ; a seton in the nape of the neck, and compression of the eye. However, Scarpa has never yet met with a single well-detailed history of a dropsy of the eye cured by these means." Upon this passage I have only to observe, that, such as my researches on the subject have been, they support Scarpa's assertion so strongly, that I feel no hesitation whatever in asserting, that the present is the only authentic instance in which the disease has been completely cured by mercury, paracentesis, or any other means, single or combined. Indeed Jourdan, in his article on this disease in the *Dictionnaire des Sciences Médicales*, after mentioning paracentesis, emetics, diuretics, and mercurial preparations, says, "*Mais il serait difficile de trouver une seule observation digne de foi, constatant l'efficacité de ces divers moyens.*" Such being the actual state of the facts, it is manifest that the unexampled success of mercury in this case is owing to its having been employed, not as a diuretic, but as a sialagogue, and so as to bring the whole system, and consequently the eyeball, strongly under its influence.

5. It will be observed, in this case, that vision commenced to improve, and the size of the eye to diminish, from the moment that ptyalism had been fully established. These circumstances cause me to regret that I did not produce that effect more rapidly, by giving the pills of calomel and opium every third hour, instead of thrice in the day. Had I done so, I am convinced that the cure of the disease would have been considerably expedited.

6. The use of mercury to ptyalism has enabled me to dispense with the aid of leeches in cases of morbus coxæ, iritis, and other affections ; but my observation of the effects of their free application in this case, convinces me that they greatly assisted the action of mercury.

7. This case confirms the general observation, that hydrophthalmia affects but one eye, and is always slow in its progress. It also shows that the disease is not, as Beer supposes, necessa-

rily connected with either a dropsical or chlorotic state of the system, or the sudden healing or repulsion of exanthemata.

8. During nearly thirty years that I have been actively engaged in civil and military hospitals, and in private practice, I have seen and treated, and seen others treat, a great number and variety of diseases of the eye; yet this is the only genuine example of general hydrophthalmia that I recollect having seen. I have also seen very few cases of either the aqueous or the vitreous variety, and scarcely any which was not combined with a greater or less degree of either staphyloma, closure of the pupil, or loss of transparency in some of the humours. Hence I infer that the true disease, particularly its general variety, is of very rare occurrence. Jourdan is also of the same opinion. It is difficult, therefore, to reconcile his experience and mine with that of systematic and other writers on the eye, for their descriptions seem to show that the disease and all its varieties are far more common.

II.—*Case of Retinitis.*

Admitted, under my care, into the Richmond Hospital, December 24th, 1839, Bridget Johnston, aged 28, a servant. She has been for the last four months out of employment, being previously in comfortable circumstances. Three weeks since, the greater portion of her clothing having been taken away, amongst which were her shoes and stockings, she thus caught cold, and was almost immediately seized with shiverings, headach, pains in every part of the body; amongst these were violent darting circumorbital pains, and pains in the balls of both eyes, which were always worse at night, the change commencing about two or three o'clock in the afternoon, and, from this time, continuing very severe till morning, when a remission would occur. Accompanying these symptoms, were frequent flashes of light and sparks of fire crossing, and midges or motes continually flying before her eyes; occasionally, too, red globes and small balls of fire would appear at a very short

distance from her bed, or wherever she was seated. At night, the light of a candle would assume a variety of colours; green, blue, redder than natural, approaching to a deep scarlet or crimson hue, and by times an intermixture of the first three. Coexisting with these sensations, the principal annoyance was produced by a feeling of sand, or small gritty bodies, interposed between the eyes and eyelids, and a copious flow of scalding tears. In consequence of no treatment being adopted, her sight daily and gradually became shorter, weaker, and more imperfect, and the sensations above described became every day worse and more distressing.

Two days before admission, her vision became so totally obscured, that she was unable to distinguish persons, as far as features or particulars were concerned; but, at night, persons seemed to her as large black objects moving about; the intolerance of light was at this time extreme, being obliged to keep the eyelids closed the greater part of the day, and the flow of scalding tears was much more copious. In this state she was brought into hospital, unable to see her way, or discern one object from another, and complaining of the sensation of two balls of fire constantly placed directly opposite the pupils, and to which she attributes her inability to see other things.

On admission, both pupils were dilated as much as could be imagined, scarcely a line of the iris being visible; the stimulus of light, however strong, seemed to produce no contraction, the pupil and iris of each eye being insensible to its effects. No prominence or enlargement of the balls was apparent; the lens and all the humours were perfectly transparent, but, on looking into the bottom of each eye, a very distinct glaucomatous, or rather sea-green, appearance presented itself. She asserts, that even the faces of those who examined her eyes are all but invisible; and that the difference between day and night is made known to her by the increased general distress, and flow of tears, induced by the former. Twelve leeches have been applied to the

eyelids, from time to time, and calomel with opium given. Since then there has been a daily amendment, the symptoms not being so acute; but the improvement has not been, as yet, so marked as this morning, 27th. The intolerance of light has in a great measure subsided, a pretty strong degree of it being borne without increased distress; the sandy, or gritty, sensation has gone away; the globes of fire no longer obstruct the vision, she being able to see tolerably far, and mark the difference in the features, and discern even small-sized objects at some distance from the bed; the supra-orbital pains are less; sometimes in the day, they dart from temple to temple; the pupil is not so much dilated; the iris contracts and dilates when exposed to the action of light; when not subjected to the full force of this stimulus, the pupil is dilated to one-half or three-fourths more than its natural size, the iris itself appearing perfectly healthy; the blood-vessels are less numerous, more prevalent on right than left; an opaque, greenish or glassy appearance is still seen in the bottom of the eyes, not unlike that seen in some cases of amaurosis; general health good; sleeps better now. The application of leeches to the eyelids, and the pills of calomel and opium to be continued.

28th. No leeches could be procured; the pain shooting from one side of the head to the other, across the eyebrows, is exceedingly severe; the left eye appears more inflamed, the conjunctiva being very vascular; the secretion of tears more abundant; the irritability increased, and sandy sensation more annoying; vision, however, has not undergone any change for the worse; the mercury is beginning to take effect; copperish taste in mouth; slight sponginess of gums, with an unusual flow of saliva; pulse of natural frequency; digestive functions regular. Leeches and pills repeated.

29th. Her sight is considerably improved; much stronger than heretofore; so much so that she can see double or treble the distance, and even tell the characters of different letters of middle-sized print, though unable to read the words off at once.

The leeches were not applied till yesterday ; instant relief from the new inflammatory symptoms was experienced ; the sea-green appearance visible in the bottom of both eyes has almost disappeared, there being now nothing obvious except what is generally seen in healthy eyes ; the same remark applies very nearly to the pupil and iris ; conjunctivitis of the left eye also is less. Repeat the leeches and pills. Two small blisters to be applied over each supercilium.

30th. The mouth is more decidedly affected than noted on the 28th ; she reports that her vision is nearly as good as ever, excepting a degree of weakness, when exposed to a strong light, or induced by looking on the same object for any length of time ; her sight reaches to a comparatively great distance, enabling her to observe trees, and other objects, three or four hundred yards from the ward ; this day, which is gloomy, is particularly favourable to her sight, and all the unpleasant symptoms noted on previous days have subsided in a great measure. Same treatment continued.

January 4th. Profuse salivation took place two days ago, since when the improvement has been progressive; the functions of both eyes may now be said to be performed in a perfect manner ; no return of supra-orbital pains ; slight irritability of the right eye exists.

℞ Emulsionis Arabicæ uncias quatuor.

Olei Terebinthinæ Purissimi unciām.

— Olivæ uncias tres.

M. Sumat hujusce mixturæ cochlearia duo amplā ter in die.

6th. Convalescent.

Discharged cured on the 14th of January, 1840.

Observations.—1. In this case, the appearances, symptoms, and sensations are precisely those which characterize retinitis, while those which were absent show, that the retina was the only tissue, in either eye, that was affected. The case is, therefore, one of pure, uncomplicated retinitis, which I believe to be

of rare occurrence. The circumstance of the disease attacking both eyes at once, also appears to me to be uncommon.

2. Speaking of the effects of mercury in this disease, Mr. Travers expresses himself thus: "I have," he says, "been witness to its power, in suddenly arresting the disease, in too many instances, not to entertain a far higher opinion of it than any other article of the *materia medica*."* If ever Mr. Travers's opinion was strongly borne out, it is borne out by this case; for although general bleeding, so generally had recourse to in such cases, was not employed, yet the almost unaided powers of mercury proved themselves fully equal to the removal of the disease, and the perfect restoration of vision.

ART. XIV.—*Observations on the Use of Nitrate of Silver in some Affections of the Mucous Membranes.* By ALFRED HUDSON, M. B., Physician to the Navan Fever Hospital.

SINCE Dr. James Johnson directed the attention of the Profession to the effects of small doses of nitrate of silver, in cases of morbid sensibility of the stomach, it has probably been more generally employed than from most books we might be led to suppose, few medical writers having dwelt much upon its use in any disease except epilepsy, though several have in a cursory manner noticed its beneficial effect in different morbid states of the stomach.

Thus Dr. Osborne† assigns it an useful adjuvant action, as an astringent in gastralgia, with sour vomiting. Mr. Langston Parker‡ classes it with morphia and bismuth as a *sedative* in ulceration of the stomach. Dr. Bigger§ gives us the testi-

* A Synopsis of the Diseases of the Eye. 2nd edition, p. 311.

† See Dr. Osborne's Propositions, Dublin Journal, vol. vii.

‡ On Ulceration of the Stomach, Medico-Chirurgical Review, vol. ix. (new series,) p. 652.

§ Gleanings, Dublin Journal, vol. xii.

mony of Dr. Steinitz, to its efficacy in nervous debility of the stomach; and of Dr. Schneider, in dyspeptic palpitation; and a case of its successful exhibition, in this latter affection, is given by Dr. Copland, in his article "Indigestion;" and recently M. Boudin* has published his observations on its effects in gastro-enterite, when given by the mouth and by enema.

For several years I have been much in the habit of using this medicine in the stomach complaints so common among the peasantry, generally selecting those cases in which the milder and more usual remedies had been previously employed either by myself or others. The following is a fair instance of its effects in aggravated gastralgia:

Mrs. P——, aged 35, consulted me February 3, 1836.—States that she has been for a long time subject to occasional attacks of pain in her stomach; that since last autumn this pain has been constant, and accompanied by frequent vomiting, of a saltish, watery fluid, and latterly of considerable quantities of mucus, which on one occasion she observed to be *patched* with blood. She has several times vomited blood in an altered state, and mixed with the contents of the stomach. The pain is much aggravated by food, and shoots in various directions through the chest and back. The bowels are moved only once in seven days; menses suppressed for three last periods; the face is wasted, and extremely sallow. She has been at different times under the care of two medical men in the country, by both of whom her complaint was pronounced to be organic disease of the stomach. An eminent physician in Dublin also expressed the same opinion, and prescribed cicuta and soda, but without affording the least relief.

I fully concurred in the diagnosis; but thinking that there was an ulcer in the mucous membrane of the stomach, which might, perchance, be benefited by the topical action of the nitrate of silver, I prescribed it in doses of half a grain twice a

* Edinburgh Medical and Surgical Journal, No. 141.

day, combined with a little extract of hyoscyamus; and I directed a tea spoonful of castor oil to be taken every evening, to solicit the regular action of the bowels.

Feb. 15th. She called upon me, and stated that since the second day after commencing the medicine she has had but one attack of pyrosis, and has rejected no food. She has still some shooting pains in the chest and side, but much less severe than formerly. The bowels are regular; her appetite and strength much improved.

From this date she had no return of her complaint; she continued the use of the medicine for about a month; she menstruated soon after, and in a few months became pregnant. I have since made several inquiries after her health, and understand that she has continued free from complaint.

The above case impressed me with so favourable an idea of the powers of the nitrate in aggravated gastralgia, that I have since employed it in a great number of cases of this affection, in private and dispensary practice, and with results the most satisfactory. I selected the two following cases for admission into the hospital, in order to insure the most conclusive trial:

Michael Monaghan, aged 15, admitted February 3, 1839.—Has suffered for six months acute pain, with tenderness on pressure in the epigastric region; great distention of stomach after eating; thirst, costiveness, and vomiting of sour fluid. Pain usually commences about an hour after dinner, and continues through most of the night, preventing sleep; it is generally accompanied by vomiting of sour fluid, without food. He has been under medical treatment, but, as he says, without benefit.

His sunken and anxious face presents a picture of extreme suffering.

Nitrat. Argenti gr. $\frac{1}{4}$.

Opii. gr. $\frac{1}{4}$.

Pulv. Rhei;

Ext. Humuli, aa. gr. i.

Ft. Pil. ter die sumenda.

Bread and milk for diet.

His farther history is, that during his stay in hospital he had but one return of the vomiting. The pain and tenderness subsided in the course of a week. The pills were discontinued on the tenth day, and on the twenty-eighth he was discharged free from complaint.

Mary Dunne, aged 45, admitted October 18. Has had frequent attacks of pain in the stomach and vomiting, for the last fifteen years. She formerly enjoyed remissions of the complaint, but for ten months past she has had three or four attacks every day. Pain usually comes on in about an hour after taking food. She then throws up a large portion of the food, mixed with sour fluid: occasionally she vomits a quantity of fluid resembling the washings of flesh; the bowels are costive.

She was ordered a milk diet and the pills, as in the last case.

As might be expected, it was some time before any decided benefit was experienced. She took the pills for a week without the interruption of any of her daily attacks. She then seemed to improve for some days, but afterwards had a return of the vomiting of sanious fluid, and at the end of a week another.

November 11th. Her attacks were become much less frequent, and her appetite improved. I ordered her a mutton chop daily.

From this time there was a steady and constant improvement, and she left the hospital free from complaint, and much improved in strength and flesh, on the 2nd of December.

This woman had taken a great deal of medicine, as bismuth, morphia, &c., and she repeatedly said that she never felt any relief to be compared to that afforded by the pills. No doubt, the strict regulation of the diet in an hospital had its share in the cure; and relapses will occur after the above treatment as after any other, since potatoes and whiskey have the same power as before to produce irritation of the mucous membrane. I had a proof of this very lately in the person of a female patient, whom I formerly relieved of very severe gastralgia,

but without curing a very tender attachment to the bottle. The consequence was a return of her complaint, and its termination, the rupture of the stomach in the act of vomiting, and death from peritonitis in a few hours.

We not unfrequently meet dyspepsia combined with sympathetic affections of other organs. On the use of the nitrate of silver in dyspepsia, with palpitation, I need only refer to Dr. Copland. I have several times given it where the painful feelings were referred to the *head*, as giddiness, especially on motion; confusion of vision; ringing noise in the ears; with, at the same time, a pale countenance and feeble circulation. Here, I think, it does good, as in epilepsy, partly as a tonic, and partly by its stimulant action on the cerebral circulation. At all events, it was the analogy of this state of the brain to some forms of epilepsy that led me to give it. One of my patients was a blacksmith, who said that as long as his head was down he felt no uneasiness, (as while shoeing a horse,) but that on rising the vertigo was extreme, his vision confused, and that he reeled and could scarcely, at times, stand. He had pain and feeling of distention of the stomach after eating; his face was pale; his pulse weak; and his skin cold and clammy. This man got rapidly well by taking a pill of nitrate of silver, capsicum, and extract of gentian, twice a day.

Some delicate females, to whom I gave this medicine for nervous debility (as it might be termed) of the stomach, and in whom the primary complaint was uterine leucorrhœa, observed to me, that while the painful feelings in the stomach were relieved, a corresponding amendment took place in the older affection.

Acting upon this *hint*, I made some trials, selecting as well as I was able cases of *uterine leucorrhœa*, so ably distinguished and described by Dr. Churchill.

Mrs. R——, aged 36, the mother of four children, was confined more than a month ago, and since she commenced moving about has been tormented by a viscid, transparent,

colourless discharge, which goes off at night and returns during the day, in great quantity. She has dull pain in the loins, and gnawing at the pit of the stomach. She has had several abortions, and suffered much from the same complaint after each of them.

April 5th. She commenced taking the nitrate of silver in doses of a third of a grain, with powdered ginger and extract of hop, three times a day.

On the 15th of April she had taken ten grains of the medicine, and was quite well. She said she never got well so quickly in her life : she soon after became again pregnant.

August 6th. I was consulted by Mrs. M——, aged 38, who states that she has had leucorrhœa for ten years ; that it is much worse after the menstrual periods. She has dragging pain in the loins ; general weakness, especially in the back ; sinking feel in the stomach, and a craving for food, without appetite ; her bowels are sluggish ; tongue pale and flabby.

She has consulted various medical men, and has spent several summers (by their direction) at the sea side, but without any material improvement. I prescribed the same medicine as in the preceding case.

August 20th. States that the discharge, which was very profuse at the time of commencing the pills, ceased entirely within a week, and has not since returned ; her general health is much improved. I ascertained a few days ago that she still continues well.

The only other case of this kind I shall select from a number, which I have taken notes of, is one that I consider especially interesting, because the discharge (which was vicarious of suppressed menstruation) could not be attributed to debility, nor the good effects of the nitrate merely to its general action as a tonic.

M. M'Donnell, aged 19, presented herself as an extern patient at the hospital, October 1st. States that more than two months since menstruation was suddenly checked by her wetting

her feet, and has not since returned, but that at each period she has had pain in the loins, and a transparent, colourless, glutinous discharge, present in the day, and going off during the night. She feels great languor and debility, loss of appetite, weight about the heart and palpitation, hemicrania, and noise in the ear; the complexion is becoming pale; the tongue flabby, and indented by the teeth.

Ordered the pills, as in the preceding cases.

Oct. 12th. States that the leucorrhœal discharge which came on for the third time, about her former visit, was apparently much diminished by the medicine, continuing only three days, instead of five, as formerly, and being succeeded by a scanty flow of menses.

November 19th. Has not been able to attend for more than a month, and in consequence has not had medicine. The discharge has, within a few days, returned.

Ordered

Nitrat. Argenti, gr. xii.

Aquæ ℥iii.

Tinct. Amar. ℥i. M.

Sum. cochleare parvum ter die.

December 20th. States that in three days after her last visit the discharge ceased, and, after an interval of twenty-four hours, was followed by the menses in natural quantity, and continuing for three days. The general health is very much improved: weight at præcordia and palpitation nearly gone, &c.

Omittr. medicamenta.

It might be considered superfluous to allude to the employment of this medicine in diarrhœa and dysentery, as it is a frequent practice in the Dublin Hospitals. I first saw it administered by Dr. Osborne in Sir P. Dun's Hospital, in 1831, as an enema in dysentery. I was much struck with its effects, and have since repeatedly followed the practice. One of my friends in this country, (Dr. Toler,) who was a pupil of Dr. Osborne's, informs me that he has frequently employed

this enema in cases of cholera with the best effects; and I have myself been a witness of his success in more than one case of the kind. On the 25th of last month, (December,) I was called to see a lady in an adjoining county, under the following very unfavourable circumstances. She had suffered an abortion nearly four months before, and had nearly lost her life from hæmorrhage; she then suffered all the forms of *spurious* excitement after great loss of blood; and as these yielded she was attacked with *phlegmæmia dolens*. Her stomach too was affected with *pyrosis*, for which she took bismuth without relief, and finally on the 17th she was suddenly attacked by the most severe and uncontrollable diarrhœa. Every kind of astringent (by the mouth, and by enema) had been tried by her two physicians, and failed. The evacuations (of which she had frequently three in the course of an hour) seemed to consist almost entirely of thin mucus mixed with the colouring matter of the blood in various shades; sometimes I was informed nearly as dark as tar. I suggested a trial of the nitrate of silver, as an enema in the proportion of five grains to six ounces of water; and by the mouth in doses of the eighth of a grain; no other astringent whatever being given. An enema was exhibited that evening and another next day with an immediate effect upon the diarrhœa.

One of her physicians kindly favoured me with an account of her progress in the ensuing week. I extract the following passage from his letter, dated January 2nd:

"The state of her bowels is decidedly improved; she had *but one* evacuation yesterday, and one this morning, a second very trifling one afterwards. The *feces* improved in colour and consistence, and the motions unaccompanied by any pain or tenesmus; her pulse 108, not intermitting more than once in a minute." (Previous to the 25th it intermitted every fourth beat.)

The most remarkable recovery from dysentery I ever witnessed, was in a man who had been seven weeks affected, and under

treatment, and daily got worse, till ordered the nitrate of silver in grain doses, from which time his recovery was rapid and complete.

But lest some friendly reader should talk of charlatanism, &c. &c., I will confess that, like every thing else, it sometimes fails. I had recently a case of the serous diarrhoea, without pain, (described by Andral*) in an old woman in hospital. After other things failed I tried the nitrate, and for a time it checked the discharge, but this soon returned, and after a while she died. On examination I found a pale and greatly attenuated state of the mucous membrane of the intestines, and nothing else.

More than two years since I attended an elderly lady, in a fatal illness, which commenced as an inflammation, and, I have no doubt, terminated in ulceration of the *Rectum*. The bowels were at first costive, but soon a diarrhoea set in, which nothing I could think of would stop. On one occasion I had prescribed acetate of lead, and acetate of morphine; three grains of the former, and an eighth of a grain of the latter, with three grains of extract of white poppy; for this the extract of opium was sent, by mistake of the apothecary, and several doses given at short intervals—she was nearly poisoned, but the diarrhoea was not in any degree checked. I had frequent communication, by letter, with Sir H. Marsh, but it equally baffled his fertile resources. At length, I tried the nitrate of silver, in doses of a grain, given in solution with a few drops of dilute nitric acid. For the first time the complaint received a check, and she had no stool for near twenty-four hours. In a few days it returned with its former violence, and I then tried the sulphate of copper, without the least effect. At this stage Dr. Marsh saw her, and said that, reviewing the different trials that had been made, he thought the best thing which could be given was the solution of the nitrate, as before. This was done accordingly, and with the effect of again checking the diarrhoea for a time.

* Pathology, vol. ii. p. 171.

I have made no trials in bronchitic cases, and the only notice of any I have met is in Doctor Copland's Dictionary, art. Hooping Cough.

From having seen it administered by Dr. Barker, while attending his clinique in 1881, in a case of hæmaturia which had resisted every other remedy, and yielded completely to this, I was induced to try its effects in two cases of catarrh of the bladder, and in a case of hæmorrhage from the urethra, or neck of the bladder, in an old man. In him, and in one of the others, who had also an enlarged prostate, it did not seem to do any good. In the remaining one the quantity of mucus in the urine voided in the course of each night, diminished from two ounces to less than half an ounce, while taking the medicine; but as this could not be long continued, and as the discharge was of four years' duration, it soon became nearly as great as before.

I think the cases adduced prove this remedy to possess,
1st. A topical action upon the inflamed congested and ulcerated portions of the alimentary canal, similar to that which it exercises upon similar affections on the surface of the body.

2nd. A power of acting as a stimulant upon the capillary circulation of different parts of the body, as of the brain and uterus.

3rd. A tonic power of the very first order.

ART. XV.—*Cases, with Observations.* By ROBERT F. POWER, Member of the Royal College of Surgeons, in Ireland, and one of the Surgeons of the Coombe Lying-in Hospital, &c.

[Continued from No. XLIX. p. 150.]

CASE II.—*Peculiar Congenital Malformation of the Middle Finger.*

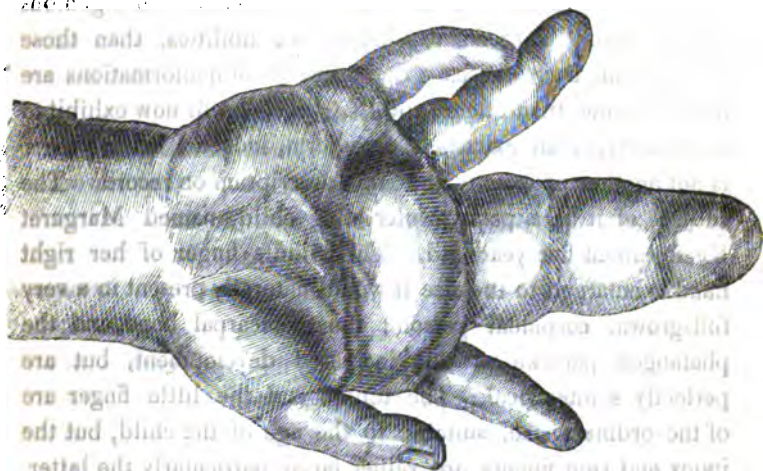
CONGENITAL deformities, no matter in what system they occur, have long attracted the attention of the Profession. To the philosophical anatomist and pathologist, they are subjects of the deepest interest, while to the operative surgeon a knowledge

of their structure and peculiarities is of essential importance. Many of those deformities come within the immediate province of the latter, and are capable of being remedied by his skill ; and there are few cases better calculated to enable an ingenious and dexterous surgeon to display his abilities, than those arising from such causes. Some species of malformations are more common than others, and that which I will now exhibit to the Society, is an extremely rare form, indeed I believe there is not another of exactly the same description on record. The subject of it is a pretty, interesting child, named Margaret Keefe, about five years old. The middle finger of her right hand is enlarged to the size it would naturally present in a very full-grown, corpulent person ; the metacarpal bone and the phalanges partake of this increased development, but are perfectly symmetrical. The thumb and the little finger are of the ordinary size, suitable to the age of the child, but the index and ring fingers are rather large, particularly the latter, and are divaricated from the middle, in consequence of its abnormal growth. On turning up the palm of the hand, the enlargement at the base of the phalanx of the hypertrophied finger is very remarkable, and gives this part of the hand the appearance of that of a grown person. The integuments are natural, and her left hand, figure, and lower limbs are perfect and symmetrical. The accompanying drawings, which were taken from the cast, exhibit the hand in both positions.

It is stated that the mother, immediately after delivery, and before she could have seen the child, inquired from the person attending, if her infant "had any fingers on the right hand, or if they were glued together?" And she assigned as a reason for asking the question, that when about four months pregnant, a window-sash fell upon her right hand, and bruised the fingers severely, particularly the middle one, which was much contused and swollen. Her mind then became impressed with the idea that her child would be deformed, and her first inquiry was relative to its hand. She has had other children

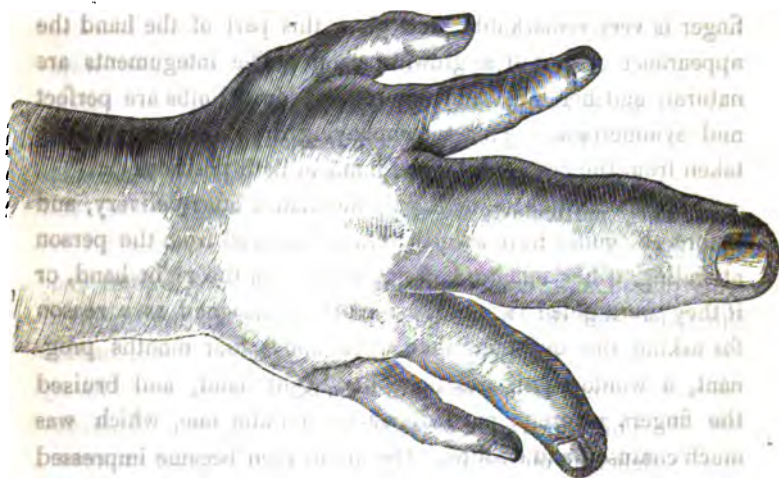
who presented no trace of deformity, and her mother states that none of her family were malformed.

A



A. Palm of the hand, showing the enlargement at the base of the phalanx.

B



B. Back of the hand, showing the hypertrophy of the middle, and the divergence of the index and ring fingers.

Before noticing further the peculiarities of this case, which is one of varied interest, a very brief sketch of the history of congenital malformations, might not be inappropriate.

The term "monstrosity" was heretofore only applied to such anomalous formations as presented striking or hideous deformities; and as the cause or mode of their production was unknown and uninvestigated, they were, in accordance with the then prevailing taste for the marvellous, invested with imaginary attributes, and regarded with superstitious awe and abhorrence. Andral describes their production as owing to deviations from the natural arrangement and distribution of the elementary particles of the tissues. During its intra-uterine existence the development of the fœtus may be subject to various modifications. Thus, owing to a want of energy in the formative powers, or an arrest of nutrition, as it has been termed, the development of organs may be suspended, and in consequence they may be either imperfectly formed or altogether deficient; or the reverse of this may take place, when, from an excess of energy in the nutritive process, the organs may exceed their natural limits in size or number. To this order the instance just related apparently belongs.

Another variety has been enumerated, in which the formative process is said to be *perverted*, as is observed in cases of transposition of the viscera, and certain anomalies in the vascular system. Certain laws seem to regulate the order of these malformations, particularly relating to their extent, figure, and situation. Thus, in the *perversion of organs*, we never find the lungs placed in the cranium, or the brain developed in anomalous situations, and this holds good with respect to the organs of digestion and circulation. It is frequently noticed, too, that the deficiency of one organ, or set of organs, is *compensated* for by the excess of others, as in cases where the number of fingers or toes is deficient on one hand or one foot, an increased number, or supernumeraries, will be found on the opposite. Physiologists have instanced numerous examples, occurring in almost every region of the body, of this peculiarity, and which M. St.

Hilaire denominates the *law of compensation*. Meckel has applied this law even more remotely: for example, in children born of the same parents, where there is deformity from excess of nutrition in one child, there is often a deficiency in another; and illustrative cases, occurring in families, are mentioned by many authors. The liability of all organs to malformation, resulting either from nutritive excess or deficiency, is not uniform: thus the *internal* organs are less frequently multiplied than the *external*; and those deriving their nerves from the great sympathetic system are oftener the subjects of anomalous conformations, than those whose nervous power is supplied by the cerebro-spinal system—a fact the more remarkable, as this latter is itself more frequently the subject of malformations than the ganglionic or sympathetic system. It is stated by Meckel, that monstrosities, arising from excess of nutrition, are oftener observed in the upper than in the lower extremities: thus *bicephalous monsters* with a single body are more common than *monocephalous monsters* with a double body. Supernumerary and hypertrophied fingers are more frequent than toes, and this has been explained by the earlier development of the superior extremities. In the majority of monsters the sex is female: this circumstance depends upon the fact, that, during the early periods of foetal evolution, as in the lower classes of the animal kingdom, there is but one sex, the female; and in a great proportion of monsters, no matter where the malformation is situated, the genital organs are arrested at an early stage of their development.

The hereditary nature of monstrous formations is well authenticated, of which Meckel, Moraud, Osiander, and many others, give instances; and it has been even suggested that many of those strange and apparently useless formations exhibited in certain animals were originally monstrous formations, which had been transmitted hereditarily, although they now serve to discriminate certain species or varieties.*

The important discovery by Serres of the law of centripital

* Andral, Path. Anat. vol. i. p. 125.

development has afforded, if not an easy, certainly a rational explanation of the proximate causes of congenital malformation. According to this theory, of the truth of which every organ in the body affords an illustration, the development is from the circumference towards the central or mesial line. This is invariable, no matter what system or structure we examine. If, therefore, during the progress of total evolution, from any cause, the deposition of the nutritive particles be arrested, a defective or deformed organ will be the result: hare-lip, umbilical hernia, anomalies in the nervous and vascular system, &c., offer examples. One of the most curious and interesting points connected with this subject is the analogy which many of the organs of the human embryo bear, during the progressive phases of their development, to the normal condition of similar parts in the inferior animals. In the nervous system, perhaps, the most striking evidence of this law is observed: this system, like all the others, obtains its highest degree of perfection in mammals; but to arrive at this, it goes through a variety of changes, each of which in the higher orders corresponds to its perfect type in many of the lower. The human embryo, for example, reproduces in miniature what is formed on an enlarged scale in some of the beings lower down in the animal kingdom.

According to M. Serres, "the primitive forms of the spinal marrow and of the encephalon are identically the same in all classes, however much the individuals may vary in point of shape or outward appearance. Thus the embryo of the reptile exhibits, at a certain period of its evolution, a strictly ichthyomorphous nervous system; the embryo of the bird reproduces the type of the reptile's brain, and the embryo of the mammal exhibits successively, the encephalic and spinal forms of these three inferior classes. In the natural state, the foetus, uninterrupted in its progress through the formative stages, arrives at maturity, and no traces of them are then perceptible; but if during any one of those periods, the development of a system be arrested, it will remain in this state, and at birth will

resemble its permanent type in some one or other of the lower classes. This fact offers an explanation of many of those congenital anomalies in the nervous system, which were heretofore considered inexplicable. The same may be said of other organs; in the generative system, we find many analogies, and almost all the congenital malformations which occur in both sexes, offer examples of what is the ordinary condition of those organs in other beings. Thus children have been born in whom the penis was bifid, which is the natural state of the organ in the didelphes, ophidia, and monetremata. In some females the vagina and uterus have been found divided by a longitudinal septum which is normal in many of the marsupiata. The uterus alone is an interesting instance; in obedience to the law already alluded to, this organ is developed by two lateral parts, approximating at the mesial line; sometimes the development is arrested before the junction is effected, and the consequence will be either a double uterus, as in some of the rodentia, the hare, rabbit, rat, mouse, &c., or the junction will be partial, thus simulating the uterus bicornis, as observed in the guinea pig, cetacea, ruminants, solipeds, &c. Again the union may be perfect externally, but on cutting into the part a septum will be found extending in the longitudinal direction from before backwards; this constitutes that deformity of the uterus termed "bilocular," which is the normal condition in other animals. In general this malformation is limited to the fundus, as in the uteri of the makis, &c. Thus then in the various changes which this organ undergoes during its progress towards perfection in the human subject, it exhibits the type of its normal condition in some of the lower animals, and if during these transitions its development be stopped, the consequence will be a congenital deformity of the part.

In this hurried sketch, I have only referred to those anomalous conformations which result from deficient or imperfect nutrition, causing an arrest in development. If we now turn to those deformities which are produced by an excess of nutrient action, we will enter upon a field for observation not less

instructive and interesting. Deformities arising from this cause may exhibit an increase either in the number or size of the organs. This increase of size may affect the whole body, and thus produce giants, or the exuberance of nutrition may be limited to a particular part or organ, as in the case of the child's finger abovementioned.

All the organs may be numerically increased, forming that species of malformation which Meckel denominates duplication of organs. Or this increase may be limited to particular parts, such as the skeleton, the nervous, or vascular systems, the organs of digestion, of lactation, and of generation, the latter giving rise to the complication of those organs of different sexes, which produce the various species of hermaphroditism. The multiplication of the extremities is also liable to variations, both as to number, situation, and point of attachment; they often result from the incorporation of two foetuses; and from this cause also arise those curious monstrosities in which the two bodies are blended together at particular regions and distinct in others. This incorporation of two embryos is generally external, but it may take place within the body of one of them, forming the peculiar kind of monster, produced by what is termed the *inclusion of germs*. Many curious instances of this species of anomaly are on record, in which the rudiments of embryos, in various stages of development, have been found in different regions, and in the male subject. There is another class of malformations, arising from perversion or transposition of organs, the most striking examples of which are exhibited in the transpositions of the thoracic and abdominal viscera; here the parts usually situated at the right side, are placed at the left, and *vice versâ*. According to Andral this general transposition can only be explained by supposing an aberration from the natural manner of development, in the original formation of the different organs. "It is important to remark, that during the earlier periods of the evolution of the foetus, several organs which subsequently incline to the right or left side, commence

by being perpendicular, and situated in the median line of the body : such is the original position of the heart and stomach, and even of the liver, which at the commencement of foetal life extends as far to the left as to the right side. The knowledge of this anatomical fact enables us to understand more readily how those organs, once situated on the median line, may at a subsequent period incline to one side rather than the other, although we are as yet unable to ascertain the causes which influence this irregular determination.* The various anomalies observed in the origins of arteries and veins should likewise be referred to this class of malformations.

It may be admitted that the greater number of monstrous formations depend upon "vices of development;" but all cases cannot be referred to this head, and it affords no explanation of those which proceed from an excess in the number or size of the parts, or those resulting from congenital transpositions of different organs. But monstrosities arising from deficiency of parts can only be satisfactorily accounted for by supposing an arrest in the progress of their development. That disease affecting the foetus will produce anomalous formations, is exemplified in certain cases of anencephalia, hydrocephalous, encephalocele, and atelomyelia, &c., and that peculiar lesion called "spontaneous amputation of the limbs in utero," and also the existence of congenital gangrene, will account for deficiencies sometimes observable in the foetus. Mechanical causes may certainly influence embryotic development: this is even allowed by M. St. Hilaire, who is of opinion "that unnatural adhesions, formed between the foetus and its investing membranes, at a period when the organs are as yet in their rudimentary condition, may have the effect of altering their natural situation and direction; and, likewise, by turning towards the placenta, a portion of the blood, destined for the foetal organs, may thereby produce an arrest in their development. If to this doctrine it

* Andral, *Pathol. Anat.*, vol. i. p. 193.

be objected, that the malformations are not confined to the surface of the body, but are likewise found in its interior, M. St. Hilaire replies, "that there has been a period in the evolution of the foetus, when these organs were exterior, consequently susceptible of contracting adhesions with the placenta; that, if these adhesions continue, the organs remain superficial, and the parietes of their respective cavities, which are generally subsequent in their formation to the organs they enclose, are in such cases not formed at all; but that, if from the increased weight of the foetus, or any other accidental circumstance, these adhesions be ruptured, the organs whose development they had impeded are no longer found protruding from their cavities, but still remain in a state of imperfect development, because the natural period of their evolution had gone by."*

Many experiments have been performed by Richerand, St. Hilaire, and others, which give countenance to this opinion:—"Richerand placed the fecundated ova of a tench in a confined vessel, and the numerous young ones, not having sufficient space for their growth, adhered together, and monstrous fishes were produced. M. St. Hilaire caused eggs to be hatched, some of which had been previously varnished in different parts, and others enveloped wholly or partially in gold-beaters' leaf, while others, again, had had their shells perforated by various means. At the expiration of the usual period of incubation, it was found that in some the chicken was not at all developed; in others, it had not attained its natural size; whilst in some instances its growth was quite preternatural."

The quality and quantity of the nutrition which a part receives will influence its development, and the experiments made on bees by M. Hubert, of Geneva, are adduced as favouring this conjecture. M. Hubert succeeded in producing, at pleasure, males, females, or neuters, by placing the young insect in a cell containing a greater or less supply of honey.

* Andral, *Op. Cit.*, vol. i. p. 198.

For a similar reason, M. Serres supposes that the absence or incomplete evolution of any part of the body depends upon the defective development of the artery which should supply the part with materials for its nutrition and growth. He instanced the evolution of the several parts of the nervous system as being entirely regulated by the development of its arteries; for example, deficient portions of the brain depend upon the deficiency of the artery which was to supply them, and in acephalous monsters the absence of the head is caused by the absence of the ascending aorta, &c. M. Geoffroy St. Hilaire concurs in this opinion, but it is one not generally adopted, and I will here take the liberty of quoting a passage from M. Andral's work, in which the arguments on this point are fairly given. He states that it is extremely difficult to decide, in this connexion of phenomena, which is the cause, and which the effect; for there is no proof whatever in support of the opinion, that the development of the organs depends on the development of the arteries, which is not equally applicable to the supposition, that the size of the arteries depends on the volume of the organs; and that when the arteries are wanting altogether, it is because the organs which they should supply are not evolved. Indeed, this latter supposition derives considerable support from the fact, that in several cases the vessels are formed in the midst of their respective organs, where they first appear as isolated red points, which subsequently elongate themselves into canals, and then, and not before, communicate with the general vascular system. This mode of formation is particularly evident in those false membranes which are undergoing the process of organization, and which eventually become as perfect in their structure, properties, and functions, as the natural serous or mucous membranes themselves. Now, in this case, it is evident that the artery could not have presided over the development of the accidental tissue, but must have been produced in it in the same manner as the other anatomical elements of which its texture was composed. Why should not the same phenomena take

place in the formation of the different parts of the embryo, the primary development of which has been with so much ingenuity and justice compared to the organization of false membranes?

In further confirmation of this doctrine, we may remark, that some cases are authentically recorded, in which the brain was deficient, although the internal carotid gave off the regular cerebral branches, which were merely smaller than usual, and were distributed on the meninges. A very interesting case of this description, in which there existed no trace of brain except a portion of the crura, has been recently communicated to the Academy by M. Baron. "It appears, from the arguments which have been adduced on both sides of this question, that, although a manifest connexion subsists between the development of the arteries and that of the parts to which they are respectively attributed, the first of these phenomena cannot, in strict reasoning, be admitted as the cause of the second, either in the regular or irregular formation."

The effect which the imagination of the mother may have upon the development of the foetus is generally believed to be very trivial, and indeed its influence is altogether denied by many. We are, however, by no means warranted in treating with incredulity, or in rejecting the evidences of, all cases which are adduced in support of this opinion. It is known to almost every extensive midwifery practitioner that strong mental emotions affecting the mother will produce effects upon the foetus, sometimes so powerful as to destroy life; and it is not difficult to suppose that these, occurring at a period before the evolution of the foetus was completed, might impede or modify its development. Those cases in which the deformity is discovered after birth, and referred by the mother to some cause which her fancy may have only *then* suggested, or which the presence of the blemished child may have induced her to recollect, are not worthy of much attention, as in general little dependence can be placed upon such statements. But there are other and well

authenticated instances, in which the imagination of the mother strongly excited and directed towards a defined object, has produced corresponding effects upon the child. The case detailed in this paper is one of this description, and the mother was so impressed with the idea, that she foretold the deformity of the child's hand *before* it was born, and inquired of her attendants as to its presence, previous to her having seen it. Another remarkable instance was told to me by Dr. Thomas E. Beatty, that had occurred in the practice of his father. A lady whom he attended expressed great anxiety about her child during her delivery; and she inquired, at the moment of its birth, and *before she had seen it*, "if there was any thing the matter with its left arm?" Dr. Beatty asked why she should think so. She replied she was certain there was something wrong about it, for that on one occasion, at an early period of her pregnancy, she happened to be walking alone in a solitary part of the Circular Road, when a beggarman came up, and asked her for money. On being refused, he took off his coat, and thrust the stump of a left arm in her face: the child was actually born with a stump! Cases, then, of this nature, confirmed by respectable authority, should make us hesitate before we reject altogether the old and popular belief that the imagination of the mother, when suddenly and strongly excited, can influence the formative process of the embryo. We observe other functions impeded or interrupted by moral emotions, and that of reproduction, although certainly less controlled, is not beyond the reach of their influence.

The treatment of monstrous formations depends on the nature and extent of the deformity. In the present instance two modes of treatment may be adopted, pressure and amputation. Any material benefit to be derived from the former is, I fear, precluded by the full and masculine development of the phalangeal bones; it may however by judicious and proper application have the effect of impeding the growth and in some degree reducing the bulk of the member: the other fingers too

may be thus brought more into their right position. The little patient had some use of the finger which, however, was more than counterbalanced, by its awkward and uncouth appearance ; I therefore, in the event of the other means not succeeding, suggested the complete removal of the deformity by amputation, and the plan which I proposed was to take away, along with the finger about a third of the metacarpal bone, and then by bringing the sides firmly together, a hand proportionate to the number of fingers would be left, and in which the deficiency would be scarcely perceptible, while its use would be unimpaired. The friends of the child, however, removed her from town before I had an opportunity of even trying compression, and I do not think they seem disposed to allow of any interference ; in that case it will be curious to observe, whether the finger will continue to grow in the same proportion to the others as heretofore, or will its growth be suspended until the other fingers approach in some degree a relative size ?

Since the foregoing was written I had an opportunity of seeing in the Museum of King's College, London, an example of congenital phalangeal deformity nearly similar. It was the cast of the left hand of an adult male, in which the middle finger was enormously hypertrophied, while the others were normal, and they had grown to the present state, bearing the same relative proportions to each other as exhibited at birth.

In this instance it appears the deformity was hereditary, several of the patient's kindred having been similarly affected. I could learn nothing more of the history of the case, which is of much importance when viewed in relation to the one detailed in this paper.

If we may judge from analogy, the deformity of the child's hand will also be progressive, and the hope that the growth of the hypertrophied finger would cease, while the nutrition of the others would continue unimpeded until they all bore the usual proportions to each other, is considerably abated, if not altogether dispelled, by the example here

afforded. The question then to be considered is, whether in such cases strong and continued compression, or amputation, performed as I have described, will ultimately give the most slightly and useful hand.

ART. XVI.—*Observations on the Pathology and Treatment of Delirium Tremens.* By Hugh Mac Donald, M. D., Physician to the Cavan Fever Hospital.

[Read before the Cavan Medical Association, December, 1839.]

HAVING for some years past bestowed much attention on this disease, and not being able to find in books written on the subject, or in medical journals, any thing satisfactory, but on the contrary, with very few exceptions, confused and ill-digested notions, leading, as I have witnessed, to an empirical and dangerous practice, I came to the resolution of studying the disease with diligence, and consulting books, both ancient and modern; with what success you will judge, when I lay before you the result of my researches.

This disease, which has obtained the name of *Delirium Tremens*, has not found a place in any of our systems of physic. It is not mentioned by Hoffmann, Boerhaave, or by his illustrious commentator, Van Swiéten; nor is any mention of it found in Morgagni. It is clear to me that both Hippocrates and Galen have treated of it, sometimes as phrenitis, and sometimes as fever.

Hippocrates, in the third book of the *Epidemics*, has several cases of fever, that appear to me to be examples of this affection, particularly the fourth and fifth cases, and in this opinion Dr. Armstrong seems to concur, particularly with respect to the case of Chœrion, which is the fifth case. There is also a case by Galen, in the book *De Locis Affectis*, of a young man, who, after drinking freely of old wine, was taken with fever and pervigilium, and perished delirious. In the two cases from Hippocrates, before alluded to, both were ill of fever from drinking to excess; the

first of these became delirious early, was convulsed on the fourth day, and died convulsed on the fifth day. The other recovered on the twentieth day, after a severe disease; and this case Armstrong thinks the strongest example of the disease. It is not to me at all surprising that the ancient physicians should have viewed the disease under the aspect of fever, when I hope that I shall be able to demonstrate that it exhibits the strongest resemblance to fever, both in its pathology and symptoms.

Dr. Armstrong says, "this disease is to be considered a strictly febrile one." Though I have not been able to find it treated as a disease *sui generis* in any of those authors I have mentioned, I find Sauvages has considered it a distinct disease under the name of *Paraphrosyne tremulenta*, sp. 1st; and he has another species, *Paraphrosyne a pathemate*, sp. 7th. I think this is a very proper arrangement of the disease, but I am of opinion that in the first species there are two distinct pathological conditions of the brain, while in the other there is but one. It is from want of this distinction that the bad practice, blunders, and confusion have arisen. The generality of practitioners prescribe only for the name of the disease, as if there was always only one pathological condition of the brain.

In the first species there is either congestion of the brain, or inflammation constituting real phrenitis. From my own observation, I would consider congestion as the more common form; but I think, and hope to be able to show that real inflammation of the brain is of frequent occurrence, and it must be of the utmost importance to distinguish it from the congestive, or asthenic form. Dr. Lendrick describes such a case, in the *Dublin Journal of Medical Science*, for September, 1832, which he cured by arteriotomy from the temple; a practice which I have repeatedly adopted with success. Dr. Lendrick was not correct in saying that mania was combined with delirium tremens, it was only the disease putting on its frequent condition of phrenitis, which disease often resembles the most furious mania. But on the whole, the article does great credit to Dr.

Lendrick ; it is one of the best I have seen upon the subject. He does not confound the different forms of the disease ; he does not erroneously recommend great depletion in all cases, nor opium indiscriminately. The disease has sometimes been called mania a potu, an improper name, but proving to my satisfaction that those who gave it that name, found it under the most highly inflammatory form.

It is not my intention to describe the general symptoms of the disease, but I may remark, that three symptoms are to be found in every species of the affection ; namely, pervigilium ; false vision, seeing objects that do not exist ; the pseudoblepsis imaginaria of Cullen ; and double vision ;—diplopia pyrectica of Sauvages, sp. 1st.—a symptom often attendant on inflammation of the brain.

When phrenitis is present it may be easily known by the admirable description of Sauvages ; “capitis dolor, delirium audax, vis artuum, pulsusque major, pyrexia acuta.” And the condition of the urine will assist the diagnosis, as I have myself remarked from the following observation from Hippocrates : “Quibus urinæ pellucidæ albæ malæ, maxime autem in phreniticis observantur.” Sect. iv. Aph. 72. When this state is present, which Dr. Lendrick calls “the sthenic form *combined with inflammation of the brain*,” the remedies recommended by him are the best, and the proper, safe, and rational practice, viz. arteriotomy, tartarized antimony, and acetum opii, with cold or tepid shower baths. In the congestive form great depletion will not be borne well, and may be highly dangerous ; but moderate bleeding from the arm, and leeches to the temples, or behind the ears, will be quite necessary, and will be well borne ; and when by these means the heat of head is abated, and the pulse moderated, opium may be cautiously administered to procure sleep.

In people advanced in life, and where the liver is affected, it would be well to put the patient under the influence of mercury, as recommended by Dr. Armstrong. In some cases of

the above pathological conditions of the brain there is often present a considerable degree of gastro-enteritis, which, from the exciting cause of the disease, is naturally to be expected. In that case, along with the proper degree of depletion, as above mentioned, instead of calomel or antimony, I would recommend hydrargyrum cum cretâ, with Dover's powder, and mercurial frictions till the mouth be affected; and also the application of leeches to the stomach.

I think the proper name for the disease would be Delirium, or Paraphrosyne ebriorum, and that it might be divided into the inflammatory, the congestive, and the asthenic forms. This last term is used by Dr. Lendrick, in his admirable article in the Dublin Journal; but I intend to restrict it to the paraphrosyne a pathemate of Sauvages, which is the only species of the disease in which stimulants or opium can be used from the beginning, because, in this case, the disease attacks those hard drinkers from whom the stimulus has been suddenly withdrawn; for delirium may occur from collapse of the brain, from want of excitement as well as from over-excitement. Bichat says that the pulsation of the arteries in the brain stimulates it to the performance of its functions; and therefore, if the stimulus is not sufficient, the brain will, and does fall into a state of collapse, in the above species, and therefore stimulants have been given in such a case with great success! Sauvages states that persons addicted to the use of ardent spirits, wine, or other fermented liquors, when they suddenly give up their use, are attacked with delirium; their pulse becomes small and frequent; they are tormented with thirst and headach;—all these symptoms, he says, cease at once, upon the exhibition of the usual stimulus, whether it be spirits or wine. A great number of examples of this kind will be found in the sixth vol. of the Ed. Medical Essays, article 46th, by Dr. Monro, primus. He states that several hard drinkers, who had met with accidents, came into hospital under his care, who became furiously delirious for want of their usual stimulus. To some of those persons he gave

a pint of spirits in the day, by which means he cured them of their delirium, their fever, and every bad symptom, and the wounds themselves looked better, and improved the more rapidly; and he adds, all these persons were great drunkards!

If the Profession shall consider these views just, it will prevent that empiricism which has prevailed in the treatment of this disease, perhaps more than in any other; for I have seen opium given in every form of the disease, sthenic and asthenic, with great detriment to the patient; and, on the other hand, I have seen much mischief by taking a great quantity of blood from the temporal artery, when there was only congestion, and not inflammation.

This last species, the asthenic, is the one in which opium can be given from the beginning, and it may supersede the use of wine or ardent spirits.

Dr. Armstrong admits that he committed several errors in this disease, sometimes by neglecting proper depletion in the beginning, and giving opium too soon: in one case where the person slept soundly after opium, he awoke with convulsions, and died!

How did this great physician fall into error? Because it is manifest that he had no just or correct notions of the pathology of the disease. The diagnosis between the congestive and inflammatory state of the brain is a matter of the utmost importance.

The state of the blood should not be overlooked, for in the inflammatory state I found both the venous and arterial blood buffy: in the congestive state the blood is not buffy at all. Convulsions sometimes occur in the highly inflammatory state. They are not uncommon in this disease, and I think that they may be considered as a sign of inflammation of the brain. They occurred in the two cases referred to in Hippocrates; and they have been considered as occurring in phrenitis, by Hippocrates, Galen, Aretæus, and Boerhaave, the latter of whom (Aphor. 712) has the following observation: "But if convulsions follow after signs of inflammation of the brain have preceded, they are commonly fatal!"

It is not my intention to enter upon a minute detail of all the symptoms, or the practice in this disease, nor do I think it at all necessary, after what I have stated; because, if I have succeeded in establishing the true pathology of the disease on sound general principles, the skilful physician will readily adopt the proper treatment in each individual case, duly weighing all the circumstances of age, constitution, and habits of living, and, above all, the peculiar form of the disease, distinguishing its true pathological condition.

ART. XVII.—*Observations on the increased Friability of the Lungs in the first Stage of Pneumonia.* By ROBERT ELLIOTT LINDSAY.

THE only apology that may be requisite for the succeeding observations is, that, taking into consideration the highly important subject of pneumonia, either as connected with its pathology and treatment, or the partial obscurity with which some of its details are invested, that any remarks, however apparently trivial, or tending to illustrate a point of comparatively inferior importance, may be borne with when they have for their object an explanation of one of the pathological appearances of that disease. The particular subject to be briefly discussed is the essential cause of the increased friability of the lung in the first stage of pneumonia. This may appear at first of such inferior consequence, and so unworthy of attention, as not being calculated to promote either our knowledge of the intimate nature of the disease or to assist us in its treatment, as almost to prevent our bestowing upon it that attention which it will be found it merits, or cultivating the advantages which it is presumed will accrue from it. When we take into consideration that the above-mentioned effect of inflammatory engorgement was originally described by Andral, and cited by him at one period as a distinguishing mark between inflammation, properly so called,

and mechanical hyperæmia—when we reflect upon this, we can scarcely avoid feeling an interest in the subject.

The fact of the great friability of the lung, observable in those who have died during the existence of what is usually denominated the first stage of pneumonia, is evident to all. We also discover this effect resulting from simple or cadaveric congestion, or mechanical obstruction to the free circulation of the blood in these viscera; and although both Andral and Laennec, who formerly were of opinion that this diminution in the cohesion of the intimate structure of the lungs, in marked inflammation, served as a test between inflammation and congestion, have abandoned this opinion, yet it is still retained and adopted by an eminent French pathologist, namely Chomel, who as yet maintains the certainty and applicability of the test. But it is presumed that it is now almost universally acknowledged, that friability of the lung is evident in both conditions of these organs, so as to prevent our seizing upon this property as any distinctive sign. The cause, therefore, of this diminished cohesion must be equally applicable to both states, as it must necessarily exist respectively, during life and after death, to account for the similarity which the appearances in both cases present. We are therefore obviously compelled, at the premises of the argument, to grant the *immediate* cause to be *mechanical*.

It shall be endeavoured now to give an explanation of the source from which this effect springs. We are aware of what the pathological condition of the lungs, in the first or congestive stage of pneumonia, consists: the terms by which we are accustomed to designate it is almost a sufficient explanation of that state. They are engorged and obstructed, presenting externally a colour of a dark red or livid hue. As to the consistence, they are both heavier with respect to weight, and more solid as to touch, than lungs in a normal or healthy condition. Upon an internal examination, when cutting into them, a bloody serum flows, sometimes in great abundance. The substance of the lungs, thus cut into, is of a deep red or crimson hue. It is un-

necessary to pursue further these anatomical facts, as it is merely sufficient in a general way to point out the usual appearances cursorily, not with the intention of relating circumstances that are not universally known and understood, but for the purpose of establishing a perfect connexion between each fact about to be adduced. These pathological appearances all obviously tend to show the unusually increased quantity of blood in the lungs, which lays the foundation or basis of subsequent morbid actions. This unusually increased mass of blood, more abundant than either what the necessities or demands of the constitution exact, or beyond the amount which is consistent with health, necessarily cannot find that receptacle which could enable it to move or circulate without any impediment to the correct and peculiar functions of the important viscera, through which it traverses: the vessels destined to convey this fluid to and from the lungs are distended beyond what their size permits, and the result obviously must be, in the finer and more minute ramifications of these delicate vessels, either a transudation of the fluid or serous part of the blood, or an actual bursting of the walls, and a consequent gradual infiltration of the blood in the structure of the lungs, afterwards in the ordinary progress of the disease to undergo modifications and changes, which, however, are not implied or connected to the particular branch of the subject under consideration.

It is carefully refrained from here, to specify the proper seat of the disease, as it would rather serve to perplex and confuse, than enlighten or unravel the question, when we reflect upon the numerous theoretical and highly probable explanations afforded by celebrated writers, in assigning an exact situation and seat to pneumonia. One division of pathologists, among whom we recognize Andral, lays its seat in the air vesicles and minute bronchi; another considers it to be placed in the interstitial cellular tissue between them; while a third asserts that all these structures, indiscriminately, are engaged in the affection. Dr. C. J. Williams states that the capillary ramifi-

cations of the pulmonary artery and veins are the proper seat of pneumonia, and that these may involve more or less of the tissues, through and around which they pass. "Thus through them," he says, "the tunics of the air cells, particularly the sub-mucous, commonly become the seat of inflammation," &c.

Thus it is perceived that, since the question is as yet at issue, and by no means definitively settled, it might be judged inadvisable to particularize any one structure or component of the lungs, as its peculiar seat.

To resume the subject, then, it appears evident that almost all parts of these organs may, according to circumstances, be engaged in this affection, so as to render it difficult to select, or point out accurately, any one particular structure in the lungs, either as the acknowledged seat of pneumonia, or as exempt from its attacks. Thus, then, we perceive that the observations before advanced, with regard to the consequences of an increased and unusual influx of blood to the lungs, constituting the essentials of the first stage of the disease, must, in the present condition of our knowledge, apply to all the constituents of the lungs, as they are more or less involved in its ravages; however, it is with great caution that these remarks are put forward, with respect to its being understood, that all the parts collectively or generally entering into their composition, are engaged in the inflammatory attack.

The morbid results, as have been before stated, must equally apply to whatever part or constituent of the lungs the disease occurs in; therefore, we can have no difficulty in accounting for the appearances observed after death, as heretofore remarked, and referring them to the fact, that the blood, or some of its particles, have, by the circulatory impetus or morbid tendency to that particular part, either transuded through the delicate membranous parietes of the vessels, or that actually a partial extravasation has taken place into the proper structure of those parts immediately contiguous or adjoining, whether they be cellular, vesicular or otherwise, and giving origin to appear-

ances after death, justifying such an inference ; or even during life, as are observable in the bloody, or rust-coloured sputa, the almost invariable accompaniment of that disease.

Now we arrive at the unavoidable consequence of this diseased action, which is the actual question itself being discussed, namely, the cause of the increased friability of the lungs in the congestive stage of pneumonia. It must appear obvious, that in both cases mentioned, namely, in the last spoken of, and in cadaveric hyperæmia, the same effect just recounted must occur, and that the possibility of its taking place after death does not destroy, or in any way impair, the reasoning applicable to the other, in consequence of the *immediate* cause already related being mechanical, and not an essentially vital process.

The necessary result of this partial transudation, in both cases, will be the same, which result must apparently be a diminution or impairment of the innate cohesive property of the lungs, or in that particular part or structure of them, in which this morbid action takes place, whether that portion be vesicular, cellular, or vascular.

This diminution, or lessening, of the molecular cohesive power of these viscera, arising from the cause already explained, must have one palpable and obvious physical effect, namely, a friable, and easily lacerable condition, upon the application of comparatively trifling force.

However, it must not be imagined here that the opposite extreme is rushed into, while we are intent upon establishing the main question immediately before us ; and for the purpose of preventing such a supposition, it is necessary to add, that this impaired condition of these organs is in some instances merely temporary, with regard to their important functional processes ; and that the diminution of their cohesion is not necessarily permanent, nor are they incapacitated or rendered unfit to be converted into their normal and pristine condition by modified healthy action.

This, then, is the explanation of the friable state of the

lungs in the first stage of pneumonia, referrible to the diminished cohesive power of these organs, owing its origin to the transudation or exosmosis of the blood through the walls of the fine capillary ramifications of the pulmonary vessels distributed in such abundance throughout the lungs.

We are aware that explanations of this peculiar condition of the lungs, have been at several periods advanced by different pathologists; however, that put forward by Andral is most deserving of attention. In reference to this subject he states, "that when the lung contains a much larger proportion of air than of blood, the parietes of the bronchia, when pressed by the finger, press in their turn on the compressible fluid they contain, and in this way, by compressing or expelling the air, retire before the pressure of the finger, and so escape being ruptured. But when the lung contains a larger proportion of blood than of air, the former fluid being almost wholly incompressible, the pulmonary tissue cannot recede from under the pressure of the finger, and is therefore easily ruptured."

This explanation seems feasible, and supported by facts, but the remarks of Dr. Williams upon this subject completely disprove his theory. The latter-mentioned writer states, with regard to this pathological question, that inflammatory and mechanical engorgements tend to diminish the cohesion of the parenchyma, more than the mere *increase of liquid in it can explain*. This tends to subvert that particular portion of Andral's theory, tending to prove that the friability of the lung proceeds in an equal ratio with the quantity of blood contained within its substance.

But, as a concluding remark upon this subject, it is merely necessary to bring forward another observation of this writer, as conducing not only to the subversion of Andral's argument, but also to the support and proof of the present observations.

He states that an engorged portion of lung does *not lose its greater friability* when the blood has been gently pressed and washed out of it. Perhaps no circumstance could by any

possibility be adduced, more definitive than the above, of the truth of the theory advanced in these observations. Here it is evident that the friability cannot be traceable to a "greater proportion of blood than of air," in that part of the lung submitted to examination, and which is esteemed by Andral as an essential to the existence of that property. But it is plainly demonstrated that the loss or diminution of that parenchymatous cohesion, through the means already mentioned and explained, whether resulting from undoubted morbid action, or mechanical gravitation, is, according to the present condition of our knowledge, a sufficiently explicit origin to which the increased friability of the lung can be traceable, in the circumstances already mentioned.

In conclusion, with regard to the imperfect and limited nature of these remarks, and their total insufficiency in even adverting to the intimate nature of that particular affection referred to, and which must be at once perceived and acknowledged, a great and almost overwhelming deficiency; the only observations that can be advanced in extenuation of such a defect, are, that even in the present brilliant era of the development of medical knowledge, the most minute and elaborate disquisitions into the nature of disease, have utterly failed in discovering, or even understanding, the intimate and innate action, peculiar to that change, denominated *disease*, and which, as yet, baffles, and perchance for ever will foil, human research and human genius.

ART. XVIII.—*Observations on Empyema*. By GEORGE GREENE, M. D., Fellow of the College of Physicians, Medical Inspector of the House of Industry, and Lecturer on the Practice of Medicine in the Richmond Hospital School.

BEFORE we proceed to the operation of paracentesis thoracis in cases of empyema, the necessity of examining the lungs, in

order to ascertain whether these organs be affected with structural disease, or not, is justly insisted on by every practical writer on this subject.

The reasons for this rule are obvious; for, from observing the results of the operation in a given number of cases, we are immediately struck with the fact that it is chiefly in those cases where the pleuritic effusion is uncomplicated with a lesion of the lung, that the operation is followed by recovery, and that, on the other hand, the chances in favour of this termination diminish in proportion to the nature and amount of the visceral disease, with which the affection of the pleura is complicated.

It becomes therefore a matter of great moment in all cases where we contemplate this operation, to determine beforehand, the exact condition of the lungs, and take into consideration every source of error which may prevent us from arriving at a correct opinion in this essential particular.

The labours of modern pathologists, aided by the assistance to be derived from percussion and auscultation, in conjunction with the consideration of general symptoms, have succeeded in revealing to us the nature of almost every disease to which the respiratory organs are subject, and of suggesting methods of investigation for the recognition of these affections. The disease of empyema, in particular, or to speak more correctly, the morbid products of which the pleural cavity may become the seat, has received a large share of attention, and in the writings of almost every modern author on this subject, the signs and symptoms which lead to its detection are so fully discussed, as to render it unnecessary for me to advert to them here, particularly as in a late work* they have not only been amply considered, but rendered more useful for diagnosis by a variety of novel and interesting observations.

My object in this communication is to draw attention to some stethoscopic phenomena which may occasionally present

* On Diseases of the Chest, by Dr. Stokes, p. 487, et seq.

themselves, owing to the compressed condition of the lung ; and further, to make some remarks on the expectoration, which, from its character, both as to quantity and quality, may lead to the supposition that it depends on an abscess in the lung, or on a fistulous communication established between a bronchial tube, and the matter contained in the pleural cavity.

It is true that the latter supposition is not likely to arise by reason of the marked stethoscopic phenomena, which enable us to recognize with so much facility the occurrence of such a communication ; but the opinion which would refer the expectoration, when it is profuse and purulent, to an abscess in the lung, may be more readily adopted, and receive apparent support from other circumstances presently to be adverted to.

The result, however, of the cases about to be detailed will afford strong evidence that the expectoration may be independent of the lesions just mentioned, or of bronchitis, and that in such cases it will either disappear, or undergo important modifications, after the operation of paracentesis has been performed.

Before entering on an explanation as to the cause of this profuse and purulent expectoration, and of its changes after the operation, I shall proceed to detail the cases in which it occurred.

CASE I.—Case of Pleuritis, with subsequent Empyema ; Paracentesis ; Recovery.

Michael Byrne, a labourer, aged 20, was admitted under my care, into the Hardwicke Hospital, on the 23rd of February, 1838. After a severe wetting, received a few days before his admission, he was seized with a rigor, which was succeeded by pain and stitch in his right side, about the mammary region. This was followed by a hard and dry cough, with painful and difficult breathing, and fever. In this state he was admitted, four days after the commencement of his illness.

On examination, no rale was discovered in either lung, but

the two inferior thirds of the right gave a very dull sound, and neither the respiratory murmur, nor resonance of the voice could be detected in this situation. The right side of the chest was but feebly expanded in the process of respiration. The voice was œgophonic between the inferior angle of the right scapula and the spine.

The treatment consisted of free detraction of blood from the arm; the application of cupping-glasses to the affected side, and the frequent exhibition of calomel and opium. In a few days his mouth became affected, after which the cough, pain, and other symptoms rapidly subsided. A slight friction sound was now heard a little above the inferior margin of the chest, on the right side, which gradually disappeared after the application of two blisters.

In sixteen days he found himself so much improved that he requested to be discharged from the hospital. At this time the fever had subsided, he had scarcely any cough, and the pain in his side had disappeared. His respiration, however, became hurried on the least exertion, dulness still existed in the situation already mentioned, and the respiratory murmur was not reestablished in the inferior third of the right lung. I did not consider, therefore, that the disease was altogether removed, but he refused to stay longer in the hospital.

On his return home, which was two miles from Dublin, he resumed his occupation, and incautiously exposed himself to cold and moisture. The cough and pain in the side now returned, the latter extending to the right shoulder; he experienced occasional rigors, and finally his breathing became so laborious that he was obliged to give up his employment.

An expectoration of a purulent character, which gradually became profuse, now made its appearance, amounting, according to his own statement, to a pint and a half daily. He applied at the dispensary in the country for advice, but notwithstanding the means adopted, the right side of the chest became gradually enlarged, and the dyspnoea became so urgent that the ope-

ration of paracentesis was considered to be the only means calculated to give him relief.

Dr. Hutton was now requested to visit him, when he found him labouring under all the usual symptoms of empyema. The right side of the chest was smooth, and enlarged in all its dimensions, and the intercostal spaces were obliterated. The liver was displaced downwards, and the heart pulsated upwards and to the left of its normal position. Except immediately under the clavicles, percussion gave a dull sound over the whole of the right chest, even extending to the left margin of the sternum: over this side no resonance of the voice or respiratory murmur could be observed. The respiration was bronchial under the clavicles. He could not lie on his left side without much distress to his breathing.

About the sixth rib, and to the right of a line dropped perpendicularly from the nipple, a convex tumour, about the size of a small walnut, presented itself; it was not discoloured; it gave evidence of fluctuation; and an impulse was communicated to it by coughing. The expectoration was copious and purulent, but no sign of pulmonary abscess or fistulous communication with a bronchial tube could be discovered. The patient was much emaciated, and had copious night-sweats and other symptoms of hectic fever.

A consultation was now held with Mr. Adams and Dr. Mac Donnell, and it was agreed to perform paracentesis by puncturing the tumour: this was effected at the time, when a large quantity of well-formed pus flowed out, without air. By coughing or a forced expiration the flow of the matter was accelerated; a probe passed readily into the thoracic cavity. The quantity of matter taken off amounted to an imperial pint, and gave immediate relief to his breathing. *In three days after the expectoration had diminished in a remarkable manner; it had also lost its purulent, and assumed that of a mucous character.*

The matter continued to flow from the opening, and his

breathing became more and more relieved. In August, 1838, the wound closed, and remained so for a month, during which he stated that his general health greatly improved, and that he considered himself to be quite well.

I did not see this man again until the 29th of November, 1839, when he again requested Dr. Hutton to examine the wound, which had opened a month after it had closed, and continued to discharge a small quantity of matter daily. On examination, two fistulæ were found in the situation of the original tumour, from which he could produce a discharge of purulent matter by making a forced inspiration, and then contracting the area of the thorax, without allowing the air to escape through the air passages. The right side of the chest was half an inch smaller in circumference than the left; the ribs on the same side were depressed, and the spine was curved towards the right side. The respiration was inaudible over the inferior third of this side, and there was complete dulness. The respiratory murmur was not near so distinct in the right lung as in the left, where it was very loud, combined with a clear sound on percussion. He complained of weakness, from the discharge, but he appeared to be in tolerable health, and had no symptom of hectic. He shortly afterwards returned to the country, not wishing to remain in the hospital.

The second case I shall detail occurred in Dr. Crampton's ward, in the Hardwicke Hospital, and I am indebted to Dr. Russell (at that time his clinical clerk) for the following account of the case, which I shall abridge from the copious and accurate notes made by Dr. Russell during the time the patient remained under Dr. Crampton's care.

CASE II.—Case of Pleuro-Pneumony of the Right Side, followed by Empyema; Paracentesis; Recovery.

A porter, named Henry Rutledge, was admitted early in April, 1838, into the Hardwicke Hospital, for pain and stitch in the right side, accompanied by a dry and painful cough, severe inflammatory fever, and the other usual symptoms of pleuritis.

He was actively treated by venesection, repeated cupping over the affected side, and the exhibition of tartar emetic, followed by calomel and opium. Under this treatment, the urgent symptoms were quickly subdued; but having again exposed himself to cold, he suffered a relapse, for which he was again cupped, and put a second time under the influence of calomel and opium. From this second attack he also recovered, and went out of the hospital in tolerable health, six weeks after the date of his admission.

On the 9th of July, 1838, nine weeks after his leaving the hospital, he was again admitted under my care, into the Whitworth Chronic Hospital. He now suffered from extreme dyspnoea. The respiration was forty in a minute; he had a short cough, and expectorated daily upwards of a pint and a half of purulent matter; he could not lie on his left side, and suffered much from copious perspirations. The whole of the right side was perfectly dull on percussion, the dulness extending across the median line of the sternum. The heart was somewhat displaced towards the axilla, on the left side, and the liver was pushed downwards, but no sulcus was observed between it and the inferior margin of the chest. The right side of the chest was smooth, and measured in circumference two inches more than the left. The intercostal spaces were obliterated, and respiration was principally performed by the left side.

The respiratory murmur was inaudible throughout the right lung, except in its superior third, and about the scapular region posteriorly. The respiration was puerile in the left lung, which gave a loud sound on percussion. A large tumour presented itself under the great pectoral muscle, and extended upwards to the right axilla; no fluctuation could at first be detected in it; the integuments presented a blush of inflammation over the tumour, and the surface was oedematous.

The dyspnoea became so urgent the day after his admission, that it was evident he could only obtain relief by an operation. A consultation was immediately held on his case by the sur-

geons of the Richmond Hospital, when it was agreed to make an incision into the tumour, which was accordingly done by Dr. Hutton, when nearly two quarts of purulent matter escaped, with the most marked and immediate relief to his breathing. No air escaped with the matter. A probe was introduced into the wound, and passed into a large cavity ; a poultice was applied over the wound, which continued to discharge a considerable quantity of matter daily.

In two days after the operation the pulse had fallen to 80 ; the respiration was nearly natural in frequency ; *and the purulent expectoration had entirely ceased, and was replaced by one of a mucous character.* From this period his recovery went on rapidly ; purulent matter continued to flow from the wound until within a few days of his discharge, when it ceased entirely, and the wound closed. He left the hospital on the 13th of September, having lost the cough and all the symptoms of hectic.

Although this case terminated so favourably, I had strong suspicions, founded on the following observations, that the substance of the lung was not free from disease. On applying the stethoscope under the spinous process of the scapula, and towards the root of the lung, a loud gurgling sound was heard ; the resonance of the voice, also, was so loud and clear in this situation as to amount to imperfect pectoriloquy, while percussion yielded a very dull sound. All these phenomena were the more striking, as contrasted with the voice and respiration on the opposite side. These signs, combined with the profuse, purulent expectoration, led me to suspect that the pleuritic effusion might be complicated with some structural disease of the lung—probably, with a pneumonic abscess—but, for reasons to be mentioned in the sequel, I now consider that these phenomena were deceptive, and did not necessarily indicate the existence of a cavity.

The next case (for the particulars of which I am also indebted to Dr. Russell) occurred in Dr. Ferguson's ward, in the

Whitworth Hospital. I had frequent opportunities of examining this case, which presented the usual appearance of empyema in the chronic stage.

CASE III.—*Case of Pleuritis, with subsequent Empyema, Paracentesis performed; Recovery.*

Patrick M'Manus, a watchman, aged 30, of a tall and athletic make, was admitted into the Whitworth Hospital on the 2nd of April, 1837. Three days before, he was attacked with violent darting pain in the left side, extending from the nipple to the left shoulder. He had a frequent and suppressed cough, the respiration was quick and interrupted, 44; the pulse 148, small, but regular. His expression was rather pallid, or of a livid hue. The auscultatory signs were those of pleuritis, with effusion in the left side. General and local bleeding was immediately put in practice, and calomel and opium administered rapidly, till pyalism was produced. At the end of three weeks some improvement had taken place, when he applied for his discharge. At this time the dyspnoea had not ceased, he had lividity of countenance, his pulse was 120, but not hard. As, however, the cough and pain in the chest had subsided, he wished to leave the hospital. On examination at this time, the lower third of the affected side was dull on percussion, and the respiration had not returned.

In the month of July this patient again returned with all the symptoms of empyema well marked. The left side of the chest was enlarged in all its dimensions; it was smooth, and the intercostal spaces were obliterated; the left shoulder was elevated; the heart pulsated to the right of the sternum; dulness existed over the whole of the left side, and extended across the sternum; the respiration and resonance of the voice could not be distinguished in this side; the respiration (except where the heart pulsated) was puerile in the right lung, and a loud sound was obtained on percussion; no evidence of fluctuation, metallic tinkling, or amphoric respiration was obtained; he lay constantly on the left side; he suffered much from perspirations, and ex-

pectorated daily upwards of a pint of purulent matter, with scarcely a trace of mucus in it.

A few days after admission, a tumour was observed under the lower edge of the left pectoral muscle, this gradually increased, became tender, and in a short time gave evidence of fluctuation. In a few days afterwards the integuments over its surface became tense and painful. A consultation was now held with Mr. Carmichael and Mr. Adams, and Drs. Hutton, O'Beirne, and Macdonnell, as to the necessity of an operation. It was determined to make an incision into the tumour, which was accordingly done by Dr. Hutton, when immediate exit was given to a large quantity of purulent matter, amounting to nearly eight pints; no air escaped from the wound. On passing a probe into the orifice it was found to communicate with the cavity of the pleura.

He bore the operation well, and on *the next day the expectoration had entirely ceased*; the cough and dyspnoea also disappeared. The wound continued to discharge purulent matter in considerable quantity, so that great debility ensued. On one occasion the wound had closed, and the expectoration began to be more copious and purulent; but when the wound was again opened the expectoration diminished and eventually ceased. He was now supported by animal food and wine, and put upon quinine mixture; under this treatment he continued to improve, and on the sixth of November was discharged from the hospital as he had an opportunity of going to the country. A month afterwards, this man had so much recovered his health as to be able to earn his livelihood as a stone cutter; the wound had altogether closed, without any recurrence of the dyspnoea or other symptoms. The heart pulsed nearly in its natural situation; the left side of the chest was contracted, and presented the alterations in shape so well known as the sequelæ of this affection.

The empyema in all of the foregoing cases appeared to be the result of uncomplicated pleuro-pneumony. In none of them

could the existence of tubercle in the lung be detected, a circumstance which will account for the favourable result of the operation. But in the case I am now about to detail, in addition to partial empyema of the right side, some of the physical signs, together with the general symptoms, indicated the existence of isolated tubercles, though not of a phthisical cavity in the left lung; an opinion which was proved to be correct by the *post mortem* investigation. This case is also important by demonstrating that the profuse expectoration did not depend either on a fistulous communication with the pleural sac, or on an abscess in the lung, and similarly to the other cases it diminished in a remarkable manner immediately after the operation of paracentesis was performed.

CASE IV.—*Case of Empyema of the right Side; Paracentesis performed with temporary Relief; Tubercular Development in both Lungs.*

In the month of October last, I saw at Kingstown, with Dr. Hutton, a gentleman who had suffered for some time from cough, pain in the right side, and difficult breathing; to these were added, loss of appetite, quick pulse, and nocturnal perspirations, together with an abundant and purulent expectoration.

On examination we found the two inferior thirds of the right side of the chest presenting a considerable enlargement. Over this portion the sound was dull, with absence of the respiratory murmur and voice; the respiration was audible under the right clavicle, but bronchial; the liver appeared to be much enlarged, and somewhat displaced downwards; over the left lung the sound was clearer, except under the clavicle towards the mammary region, where it was dull, with great resonance of the voice, accompanied by bronchial respiration. None of the phenomena indicative of fistulous communication with the pleural cavity were detected.

The surface on the right side was cedematous, and about the level of the seventh rib, two tumours presented themselves,

which were merely separate points where a large collection of matter, apparently under the pectoral muscle, was approaching to the surface. This tumour had been poulticed for some time, but as the matter was deep seated, and apparently productive of much distress and impediment to the breathing, we determined to insert a small caustic issue over the most prominent part of the swelling. In three days after this had been done, an evident fluctuation became perceptible in the anterior portion of the tumour. Dr. Hutton now made an incision into it, and immediately gave exit to a large quantity of purulent matter.

The discharge was followed by immediate relief to his breathing, and he could now lie on the left side—a position which he always avoided before the operation. No air escaped from the wound during the operation, and a probe could be passed through the incision into a large cavity. In two days after, the cough had much abated, and the *purulent expectoration entirely ceased*. The wound continued to discharge matter, but not in considerable quantity. The symptoms of hectic became less severe after the operation, and he expressed himself as much relieved from the evacuation of the collection.

These favourable symptoms continued for some time; but on his return to town, in November, the cough became again more frequent, but the expectoration was not copious, nor did it ever present the character it exhibited previous to the operation. In December he was attacked with an obstinate diarrhoea, under which he continued to labour until the middle of March, when he sunk, five months after the operation.

Post Mortem Appearances—Chest.—The sac containing the matter was formed by adhesion superiorly of the pleura pulmonalis to the costal pleura. The membrane was much thickened, and the cavity reached from the third to the tenth rib; its interior was occupied by about three ounces of purulent matter, which could be made to flow through the external wound, which continued open. Dr. Hutton and I searched

accurately for a communication between the sac and a bronchial tube, but none existed. The right lung was diminished by two-thirds of its bulk : hard tubercles were scattered throughout this lung, but no tubercular cavity whatever was found. The left lung was also studded with tubercles, and towards its apex they had begun to soften, so as to leave excavations about the size of a large pea. We were surprised to find in this side also a small sac, formed by adhesion of the pleura, similar to that in the right, but much lower down, and containing a small quantity of matter. We examined with equal care the parietes of this sac, but no communication with a bronchial tube existed.

Abdomen.—Small ulcers were found in the mucous membrane of the small intestines, near the ileo-cæcal valve : the mesenteric glands in the vicinity were enlarged. The liver was much enlarged, with hypertrophy of its yellow tissue.

From this examination, therefore, it is obvious that the expectoration did not proceed from an abscess in the lung, or from a fistulous communication, established between the seat of the collection and the bronchial tubes. Its sudden disappearance, also, after an external opening for the matter had been made, proves that it was not the result of bronchitis.

The last instance with which I am acquainted where phenomena, similar to those I have detailed, occurred, was brought under the notice of the Pathological Society by Dr. Graves, at the third meeting, 1838. He there exhibited a specimen of chronic pleuritis, with empyema. The matter had made its way externally ; but for some time previous to death, and consequent upon the bursting of the abscess, the secretion from the bronchial mucous membrane, which had been copious and purulent, rapidly diminished, and its foster disappeared.

Dr. Graves has since informed me that he remembers to have seen another instance of this phenomenon. It occurred in a case of chronic empyema, the result of pleuritis, in a young person who had been under the care of Mr. Rumley. When Dr. Graves first saw the case, the expectoration was abundant, puru-

lent, and foetid; but some time after, when paracentesis had been performed, it became suddenly diminished, and lost its peculiar foetor. The particulars of this very interesting case, I regret to say, I have not been able to procure in time for this publication; but Mr. Rumley informs me of a remarkable circumstance attending it, namely, that on one occasion, when the external wound became closed, the expectoration re-appeared—a phenomenon similar to that which occurred in the case of M'Manus, already detailed.

It will be observed in all these cases, that a very remarkable diminution of the expectoration, and an alteration in its character, immediately ensued, after a free external outlet was established for the matter lodged in the pleural cavity, and did not re-appear as long as it continued to flow freely to the exterior of the chest; and that, on the other hand, in two instances, when the escape of the matter was prevented by a temporary closure of the wound, the expectoration again made its appearance, possessed of its original puriform character. It is obvious, therefore, that some relation must exist between these two phenomena—that is, between the accumulation in the pleural sac and the appearance of a profuse expectoration; the latter diminishing in proportion to the quantity of matter discharged from the external wound, and again increasing whenever the external evacuation is from any cause impeded, and this in cases where, in one instance at least, it has been *proved* that no communication was established between the sac and the bronchial apparatus.

The first explanation I heard offered as to the nature and cause of this expectoration was suggested by Dr. Hutton, in a consultation held on one of the cases detailed. He observed that he had frequently seen the expectoration to subside and lose its character when an opening had been made for the collection, and had consequently come to the conclusion, that in many cases of empyema the expectoration was the result of an effort of nature to free the system of the purulent deposit,

through an external outlet, which in these instances was effected through the bronchial tubes. This explanation I consider, for reasons to be mentioned, as applicable to many cases where we have physical evidence against the supposition, that cavities exist in the lung, or that a fistulous communication has been established between the morbid collection seated in the pleural sac, and the bronchial tubes. Now, if it can be proved that this explanation of the cause of the expectoration is correct, it will be important, because many cases, will occur where, when the physical signs are obscure, we may be inclined to lay too much stress on this symptom, and ascribe this profuse and purulent expectoration to a pulmonary abscess, and consequently, be less inclined to recommend the operation of paracentesis.

That the expectoration, however, (in cases where the physical evidence is not sufficient to ascertain the existence of cavities, or is altogether opposed to that supposition,) may in many instances be regarded as a simple excretion from the bronchial mucous membrane, receives confirmation from observing that other portions of this structure serve as outlets, through which morbid collections are evacuated from the system. The subsidence or disappearance of morbid collections in the abdominal cavity is often effected by a critical discharge from the bowels, and the fact is familiar to every practitioner. But many instances of these critical discharges, more remarkable than that just mentioned, are on record. Thus the matter of empyema* has been discharged by evacuation from the bowels, and in other cases from the vagina and from the bladder.

The most remarkable instances, however, of this translation of purulent matter to the mucous surfaces, and those best authenticated by *post mortem* examinations, are detailed by Dr. Mouatt† in the Report of the Regimental Hospital, Bangalore. An analytical table of thirteen cases is given of these purulent

* Townsend, art. Empyema, Cyclop. of Prac. Med.

† Med. Chirurg. Review, 1838.

discharges, by which it appears that in eleven pus was discharged by the bladder ; in ten by stool ; in four by expectoration ; and in one by vomiting. In the majority of these cases the purulent collection was seated in the liver, but in one it was found in the stomach.

The remarkable circumstance demonstrated in some of these cases (Nos. 3, 5, 6, 9, 10) by the post mortem investigation was, that although during life purulent matter was passed by the urine and by stool, yet no communication whatever could be traced between the hepatic abscess (which was the disease in five of them) and the intestinal canal, kidney, or bladder, or between the stomach, which was the seat of the purulent collection in a sixth, and the parts just mentioned. It is to be observed that the discharges by stool and urine were followed by relief to the hepatic affection, and the mucous membrane was not diseased in the bladder or intestine. Here then we have several well marked instances of pus evacuated from different outlets, as Dr. Mouat observes, by "absorption and subsequent excretion," but by what agency this is effected, whether by the absorbents, or through the vascular system, is as yet undetermined, the opinions of eminent physiologists being at variance at present on this interesting physiological question.

Other instances might be readily adduced of similar critical discharges, those mentioned, however, are sufficient to shew that they are often effected by some peculiar determination to various portions of the mucous membrane, and as it has been proved above, that no fistulous communication may exist between the purulent matter seated in the liver, stomach, or peritoneal cavity, and the portion of the mucous membrane through which it is evacuated, we are entitled to assume, by a parity of reasoning, that a similar disposition may occasionally prevail when matter is accumulated in the pleural sac, and be evacuated by excretion through the great emunctory presented by the bronchial mucous membrane.

If this supposition be correct, it will account for the remark-

able character of the expectoration in the cases I have detailed, and will, so far as the consideration of this symptom is concerned, disembarass our minds as to the cause which has produced it. For, unless other evidence of a very decided character is obtained, that the lung is diseased, the occurrence of a very copious and purulent expectoration may be referred to the operation of the pathological law above alluded to, and, consequently, should not prevent us from having recourse to the operation of paracentesis. Whether the matter of empyema is, in any instance, completely discharged from the system by this determination to the bronchial mucous membrane, I am unable from my own experience to determine, but in those cases where it has been vaguely stated, that the matter has been absorbed, it is probable, that the removal of the collection has, in part at least, been effected in the manner just explained.

I shall now shortly advert to another source of perplexity as to the state of the lung, in these cases of empyema attended with profuse expectoration. From the compressed state of the organ by the effused fluid, the phenomena of the voice, and of the respiration, will become exaggerated at the root of the lung, and in consequence of the great accumulation of puriform matter in the larger tubes, a loud gurgling rale will be produced. When, therefore, the stethoscope is placed over the root of the lung, many of the signs of a pulmonic cavity appear to exist, and the doubt which thus arises as to the integrity of the organ, is strengthened by observing the great quantity of purulent matter which is expectorated. These signs were observed in the case of Rutledge, and were at times so strongly marked, as closely to resemble those which are produced by abscess in the lung. Shortly after the operation, however, when, as has been already observed, the expectoration ceased, it was ascertained by applying the stethoscope to the same situation, that these signs underwent an important modification. The loud gurgling sound and extraordinary resonance of the voice gradually subsided, till at length all the physical signs which had given rise

to so much uncertainty as to the sound condition of the lung, completely disappeared.

From observing, therefore, these modifications in the physical signs, I was led to infer that they were produced in the manner just stated, viz., by compression of the pulmonary tissue around the greater bronchial tubes, more or less charged with a quantity of purulent matter, and that when, after the operation, the mucous membrane ceased to excrete this matter, and the lung was allowed to expand from the removal of the compressing cause, the auscultatory phenomena began to approximate to their natural character.

The existence, therefore, of these signs, accompanied as they may be by a copious purulent expectoration, are not to be held, in cases of empyema, as necessarily indicative of structural disease in the substance of the lung, if they are only observed in the vicinity of the root of this organ. That the altered condition of the parenchyma enveloping the tubes, is favourable to the propagation of these signs to some distance from the root, is evident from physical considerations, but a careful examination in such cases, will shew that they gradually diminish in intensity according as the instrument is carried from the root to the lesser divisions of the bronchial tubes. This fact, therefore, if clearly ascertained, will form our principal ground for diagnosis, it being evident that these phenomena, if heard above the clavicle, and not at the root of the lung, or if they gradually diminish in intensity from the former situation to the latter, will be more indicative of a cavity, and the same observation will hold true, if the phenomena are heard in any other situation remote from the root of the lung.

Other and important considerations must, however, be taken into account before we can pronounce positively as to the existence of a cavity in such cases, or if we are satisfied that such a lesion has occurred, as to its nature. As, however, I can at present add nothing to the valuable remarks of a late wri-

ter,* on the grounds for our diagnosis between phthisical and pneumonic cavities and dilated tubes, I will not pursue the subject further, my object being to draw attention to the fact, that the signs of a cavity may be simulated, at or near the root of the lungs, and from the causes above assigned.

With respect to the bearing which the result of these cases has on the question, whether an operation is advisable in cases of empyema, little can be added to what is already known. They were all instances of what has been termed "empyema of necessity," where the matter had penetrated the pleura some time previously to the collection presenting itself, in a defined form, under the integuments, and where the pointing externally did not correspond to the opening in the pleura. Such cases are known to end more favourably than others, partly, perhaps, from the gradual process adopted by nature, and the sinous nature of the opening, and partly because in these cases the empyema is generally partial. It is remarkable that the place of this pointing was nearly the same in all—viz., under the edge of the great pectoral muscle.

In the table given by Dr. Townsend, of the results of the operation in twenty-three cases, it is not stated whether the successful ones were those of the "empyema of necessity" or not: this, however, is an important circumstance to be stated, because in the great majority of those cases, if there be no development of tubercle, recovery is likely to follow from the operation; a more important ground for forming an opinion for or against the propriety of operation should be founded on the calculation of the results in a large number of cases, where no thoracic abscess and pointing had occurred, and where, consequently, the pleura had been penetrated by the operator.

The result of the cases which I have detailed confirms the remark made by Begin†—that, of the two methods of evacu-

* On Diseases of the Chest, by Dr. Stokes, pp. 148, 389.

† Dict. de Med. et Chirurg., art. Empyème.

ation of the matter of empyema, that by thoracic abscess is always more advantageous than the route the collection sometimes takes by perforation through the bronchial tubes, inasmuch as, in the latter instance, there are often lesions of the pulmonary tissue superadded to the primary affection.

I shall now briefly enumerate the conclusions which a consideration of the foregoing facts and observations suggests.

1. That in cases of effusion into the pleural cavity a copious and purulent expectoration is a frequent accompaniment, depending, in some instances, on a fistulous communication established between the seat of the collection and a bronchial tube, and that when such a communication has taken place, it may be recognized by well-known and characteristic signs.

2. But that, in other instances, the expectoration may be equally copious and purulent, while all the physical signs of such a communication are absent, and where, consequently, the symptom in question cannot be referred to such a lesion.

3. That an expectoration of a similar character will also occur in some cases of empyema, uncomplicated with tubercular excavations or with abscesses, the result of pneumonia, as can be proved—first, from the absence of the physical signs indicative of these lesions; and, secondly, by a consideration of the following phenomena:

4. That remarkable changes take place in the expectoration as soon as a free external outlet is afforded for the matter: it will be then observed to have rapidly diminished in quantity, and to have changed from the puriform to the mucous character, and, in some instances, to have lost its fœtor.

5. That if the external opening becomes closed the expectoration will again become copious, and will re-assume its puriform character and fœtor.

6. That as these phenomena cannot be accounted for, on the supposition that the expectorated matter is the product of bronchitis, or that it is received into the bronchial tubes, by their communication with purulent deposits in the lung, or with the col-

lection in the pleural sac, an explanation must be sought for in some general law which establishes a reciprocity of morbid actions between serous and mucous surfaces.

7. That many examples of the force of this law are afforded in what have been termed "critical evacuations;" as, for instance, where morbid collections in the peritoneum have been suddenly transferred to the intestinal mucous surface, independently of the processes of adhesive inflammation and ulceration; and that there is no reason, *a priori*, why this law should not occasionally obtain between the respiratory, serous, and mucous membranes.

8. That a recollection of this law may be of practical importance, because in cases where the physical signs of cavities in the lung are obscure, we should not allow our opinion to be biassed in favour of these lesions, by taking the expectoration, however copious and purulent, into consideration, inasmuch as it may be the result of the general law just referred to, and if so, should not form a ground of objection to the operation of paracentesis.

9. That even when the physical signs of a cavity appear to be better marked, they may be still deceptive, owing, first, to the great accumulation of matter in the bronchial tubes; and, secondly, to the compressed condition of the lung around them, whereby the natural phenomena of the voice and respiration are so modified, that, when combined with the loud, gurgling rale in the tubes, they may be mistaken for the signs of a cavity.

10. That these fallacious signs will be found in greatest intensity at the root of the lung, and will disappear more or less quickly after the operation, in proportion to the power of expansion possessed by the lung, when the fluid in the pleura, which is the cause of the compression, is removed.

11. That one of the grounds for diagnosis, in such cases, is the proximity of the signs to the root of the lung: if they diminish in intensity from this situation, they will depend on the causes

just assigned ; if, on the contrary, they are found at the apex of the lung, or any part distant from the root, they may either depend on cavities, or on an enlarged bronchial tube.

ART. XIX.—*Observations upon the Nature of Hooping Cough, and its successful Treatment by Mercury.* By JOHN JAMES MACGREGOR, M.D., Physician to the South-Eastern General Dispensary, &c.

THE following remarks respecting a disease peculiarly fatal to a most interesting class of our fellow-creatures, which the statistical tables of medicine throughout Great Britain fully attest, pretend to little more than that of bringing before the Profession the result of a new mode of treatment, practised by the writer at an extensive dispensary, where the opportunity of witnessing the various affections incidental to childhood were considerable.

Mr. Colles, in his admirable work on the venereal disease, declares that it has long been his opinion that “syphilis is the opprobrium of surgery.” In the same language, we would ask the physician, is not hooping cough at least one of the opprobria of medicine ?

It must be granted that at this present day, little or no light has been shed upon its nature, pathology, or treatment.

Its treatment is empirical and uncertain, its pathology obscure and insufficient, and clouds and darkness rest upon its essential cause. If this statement, that seems borne out by every day's experience, be true, is it to be wondered at, that the language of the physician to the anxious mother, when called upon to pronounce an opinion upon her drooping infant, should be, “ We can give no opinion ; the disease must run its course ; nothing can be done towards eradicating it ; every one knows, all we can do is to keep the bowels free, and give some simple expectorant with warm baths and a few leeches :” and this toge-

ther with a slight rubefacient constitutes the whole treatment of this fearful and treacherous malady. Hooping cough is the terror of the nurse, because she is aware that its presence entails upon the unfortunate child of her affections an amount of suffering far beyond every other malady, enhanced by a species of slow suffocation, which after lasting for months so often terminates in death.

Next to measles, hooping cough is perhaps the most fatal disease, through which the child has to pass in its growth to maturity, and when we reflect on the intensity of its paroxysms, their great protractedness, and the numerous evils they entail upon other organs, even after recovery takes place, it would be no inconsiderable benefit conferred upon mankind, if some remedy were devised in this age of medical progression, by which the cause of the disease might be combated, or at least its symptoms so assuaged that some rational hope should be entertained of a speedy convalescence. The improved treatment of measles at the present day is acknowledged by all; instead of a heated temperature and stimulating drinks, to "throw out the eruption," as it was said, the little patient, with more humanity, is supplied with cooling draughts and proper febrifuges; nor is the refreshing air of heaven excluded, as if there was poison in its touch. But still the physician re-echos the words of the late Doctor Gregory of Edinburgh in his lectures upon the Hooping Cough, "we know no cure for it." Let us take a glance at the different views medical men have formed of its nature and seat, and try if we cannot in some degree account for the uncertainty and inertness of its treatment. The most ancient notion of the pathology of hooping cough was, that it was a purely spasmodic disease, or that its cause lay in some peculiar affection of the nervous system; hence we find Cullen places it under the class *Neuroses*, order *Spasmi*. Some called it a catarrh of the stomach, whilst others, amongst whom was Gardien, conceived that the essence of the disease produced a spasm of the glottis and diaphragm.

The brain again was supposed to be its seat, and some said it was produced by debility, whilst others, on the contrary, stated it to be merely the result of inflammation of the pneumogastric nerves. It would appear that pathology has failed as yet to throw any steady or certain light upon its nature any more than fever, for although the morbid appearances found upon dissection may account for some of its ordinary phenomena, they by no means serve to elucidate its peculiar features. It is true, the glottis may be found to present the ordinary appearances of inflammation, the larynx oedematous, swollen, and diminished in calibre, and the bronchi and air cells may exhibit marks of congestion, but what light do all those appearances throw upon the hoop invariably attending the second stage of this disease, together with its long protractedness and tediousness of decline. In croup the peculiar secretion narrows the upper portion of the respiratory tube, but the cough does not in the least resemble that prolonged hoop of pertussis. Nothing can be more different than that and the brazen sound of croup, or the hissing cough of laryngitis. Bronchitis presents the same morbid appearances as hooping cough, but none of its peculiar symptoms. It follows then that there must be an essential difference between the nature of pertussis, and every other disease in the respiratory organs. That it approaches nearer to bronchitis than any other affection is obvious, inasmuch as its first stage cannot in general be distinguished from it, but the difference is instantly perceived upon the setting in of the second stage. When this occurs, the cough becomes changed, and assumes the peculiar sound which has given a name to the disease, and this condition remains, it may be for weeks and months, without any sensible change towards improvement. The attending fever would appear to be of a more severe character in bronchitis than in hooping cough, and to partake, as the whole disease generally does, more of the inflammatory type. The paroxysms of hooping cough seem to depend more on excessive irritation of the glottis than upon a ge-

neral inflamed condition of the lining membrane of the larynx and bronchi, and it is evident from the quality of the pituitous secretion that is coughed or vomited up, that the same changes are not produced upon the secerning arteries as in bronchitis, for we know in that disease, the sputa, from transparent and glairy in the first instance, passes through the various shades of yellow and green. But in pertussis, generally speaking, it retains a white frothy appearance throughout the attack. When the air cells become inflamed, which occurs in severe cases, the peculiar secretion of bronchitis is seen, but as those symptoms subside, it returns to its usual appearance. There can be little doubt that hooping-cough is contagious as well as epidemic, for many instances occur where children have been removed from the city to country air where no epidemical influence existed, and have communicated the disease to those in the vicinity. The period of life at which it occurs is also remarkable, and proves its specific nature; instances of its attacking adults, although rare, sometimes happen. One lately came under the writer's knowledge, where a gentleman took it from his infant, and it was three months before convalescence was complete. In this case the hoop was very well marked, and there was considerable oppression; he scarcely took any remedy. There is something peculiar in the symptoms of hooping cough in the first stage which often enables the physician to distinguish it from catarrh or bronchitis; the fever seldom runs so high, the breathing scarcely so much oppressed, except during the paroxysm, the eyes overflow, and the child seems to suffer more from irritability than the real oppression of sickness, and generally resumes its wonted pastime. Those symptoms are also of a more intractable character, and the usual treatment of leeching, ipecacuan, and warm baths, produces very little if any benefit in allaying* them. It is evident then that hooping cough must be a disease *sui generis*. The remote cause of

* Sedatives, such as hyosciamus and belladonna, are the remedies most recommended by French authors.

this disease, as we might anticipate, remains in obscurity, but although we cannot define it, any more than we can the essence of any other infection, yet we can confidently state what will not produce it.

Neither cold, moisture, nor any of the ordinary causes of bronchitis, will produce hooping-cough: there must be a specific cause, whether in the atmosphere or arising from contagion; and if inflammation supervene in the course of the disorder, it should be looked upon as rather the effect of the original exciting cause, as in fevers, and merely denoting the severity of the attack.

The local affections must be attended to as we do those accompanying febrile disorders, whether they arise from congestion of the lungs, intestines, or brain; but surely no man of reflection will say, that, in those cases, this is all that is to be done by the physician: he must constantly bear in mind that he has a more subtle and dangerous, because secret enemy, to contend with, whose presence in his patient's system is evinced by the disturbances created in the several organs of life. The nature of the exciting cause, then, of the disease should be our aim, and our chief object to eradicate it, through the application of some powerful medicine, influencing in its operation the constitution, as all local remedies without this are perfectly useless.

Where shall we find a medicine so likely to afford us hope for success in so eminent a degree as mercury? Its power in cutting short the most fatal disorders is universally known. The use of it, however, in hooping-cough, at first sight, seems surrounded by so many objections, that the writer would hesitate before he proposed it as a remedial agent to the Profession, were he not induced to do so from a sense of duty to them and the public, and a strong desire, sufficient to overcome all other scruples, that the attention of physicians should be drawn to the subject, and that it should undergo the strictest investigation. In looking over the most esteemed works on the Practice of Physic, and the numerous contributions scattered through our medical periodicals, so abounding with rare communications,

there is no certain remedy mentioned to arrest the progress of hooping-cough. Upon a little mature consideration, we will find that the risk of pushing mercury to salivation, in the cases of children, is not fraught with so much danger as was imagined. There appear to be two errors on this subject, which have existence in the minds of many—the first is, that it is exceedingly difficult, if not impossible, to produce salivation in children; and, secondly, should it occur, that it would lead to the most dangerous result. We would be cautious before opposing two such ancient and universal opinions, had not several instances, within a few years, come under our own immediate observation, which proved the contrary; and on conversing with men of considerable experience, they expressed their concurrence with our views. Now if this be granted, that, although there may be danger in producing profuse salivation in children, yet that, by proper attention on the part of the physician, this may be avoided, a great obstacle is removed to the proper trial of the remedy. That there may be some risk is not denied; but is it sufficient to deter us from incurring it? Tartar emetic is given every day to children in acute bronchitis and pneumonia, although instances have occurred where it produced fatal gastro-enterite; yet would it not be deemed puerile to reject so powerful a remedy in the treatment of those diseases?

Do we not administer mercury to affect the system of children, in other diseases of a fatal character? We admit that it is one of the physician's sheet-anchors in croup, and in hydrocephalus he orders the blistered surface of the scalp to be covered with strong mercurial ointment, with no other intention. It must be confessed that the use of mercury in inflammations of the mucous tissues has not been of the same benefit as in the affections of the serous membranes and parenchymatous organs, and some practitioners go so far as to almost altogether prohibit it; but there is no man who has not seen patients, in protracted cases of bronchitis, snatched from the grave by its judicious application. It is likewise a powerful means in dysentery.

Thus, we find, where the life of an individual is in danger, we never hesitate to employ the most powerful agents to effect a restoration to health, even where there may be some danger attending the administration of it, which, however, in the present instance, has been greatly overrated; for many examples have come under the writer's observation, of children who have been salivated severely through accident, and by design, who have presented no peculiar symptoms of danger from it, the mercurial fever yielding readily to purgation and warm baths, and the daily application of nitrate of silver wash to the mouth. Some cases occurred of infants salivated by a small dose of calomel, combined with a purgative. We witnessed a very severe case of a child but fifteen months old, who was ordered four grains of calomel, combined with jalap, and taken in divided doses: the ulceration of the mouth proved rather troublesome, but the child was snatched from death. Although the contrary is stated, we have seen children salivated from alterative doses of hyd. c. creta and the proto-chloride in infantile syphilis, and with the most marked benefit to the eruption. In truth, those observations might be prolonged much further, but it is not necessary, as the facts mentioned are sufficient to prove, that to produce an effect by mercury upon the system of children is not so difficult nor novel an expedient as at first it might appear to be. But let it not be supposed that any thing like indiscriminate salivation is recommended. The subject requires the utmost discretion on the part of the practitioner, and in no instance should he attempt the administration of the drug till he has preceded it by the proper antiphlogistic means. If much fever accompany the cough, it would be most injudicious to give mercury till it has entirely subsided: the first stage of hooping-cough should be treated as acute bronchitis, and not until the second is established should the mercury be given. The first case which occurred to the writer, serving to illustrate the above observations, was in Edinburgh, in the summer of 1833.

In May, 1838, I—— M——, a fine healthy boy, of fifteen

months old, was attacked with the usual symptoms of acute bronchitis. He got rhubarb and magnesian purges, pectoral mixture of tartarized antimony, hippo wine and mucilage, warm baths, &c.

At the end of a fortnight an alarming accession of the disease supervened, accompanied by high fever, great oppression, with intense mucous rale over the whole chest. The late Dr. James Hamilton was requested to see him: he ordered four leeches to the foot, four grains of calomel, and twelve of jalap, to be taken at an interval of six hours, after being divided into two powders; to act on his bowels, which had been confined for twenty-four hours. By these means the fever abated, the breathing became relieved, and the cough was less frequent. The air-cells were unloaded by a copious emetic, produced by the solution of tartarized antimony, and in a few days all acute symptoms subsided; but the little patient now began to whoop, clearly shewing that the severe symptoms which ushered in the attack were merely the commencement of pertussis, which was now fully set in. The long inspiratory hoop, the succession of short coughs, the turgid face, epistaxis, the paroxysm terminating in copious vomiting, could not be mistaken. Grain doses of calomel, combined with rhubarb, were given, with no other intention but that of regulating the bowels, but the effect was, that a severe salivation took place in two days; the gums became ulcerated, and covered with white sores; the foetor of the breath nearly insupportable; and the poor little fellow was reduced to great weakness; but from this, the cough, with its peculiar sound, totally disappeared, and never recurred: the child rapidly regained its perfect health, by the use of mild tonics and nutritious diet; the gums healed quickly, under the daily use of the nitrate of silver wash. During convalescence he was confined to a warm temperature, and never admitted into the open air till quite well. This latter mode should be strictly observed, as an atmosphere below the temperature of the body will only serve to light up the disorder afresh, by irritating a delicate

membrane, still suffering from a severe inflammatory attack. In this case the full action of the mineral upon the system, evinced by the ulceration of the mouth, and the peculiar foetor of the breath, proved the harbinger of good news, for the symptoms of this treacherous and tedious disease never afterwards recurred. How frequently do we find this the case in other disorders, when we pursue a similar treatment! Pertussis is the result of a specific irritation, and therefore requires a specific cure.* All ordinary means have failed in subduing it, and it is but philosophic and humane to adopt any mode which would appear to promise success, so that the safety of our patient be not involved.

In July, 1836, the writer was called on to see a dispensary patient, named C— D—, in Powerscourt, off Lower Mount-street, aged twelve months, in the second stage of hooping-cough. There was still some fever, and the bowels were confined. Small doses of the hydrargyrum c. creta were ordered to resolve them, and subsequently about ten grains of calomel, with ipecacuan, divided into small doses, were given three times a day, with the view of acting on the secretions; but a severe salivation unexpectedly set in, which continued with little abatement for some days, the gums, soft palate, and fauces partaking of the ulceration; the hoop, which was very severe, with its accompanying symptoms, disappeared from the period at which the mercury affected the system, and never returned. It is more difficult to salivate a child where a severe inflammation, especially of parenchymatous structure, exists, accompanied by high fever. Several instances, however, have occurred to the writer, in which full ptyalisms have been established, both from large doses of calomel or very minute ones, often repeated, and invariably with the most decided benefit.

Dr. Corrigan, in an interesting communication made lately

* After the inflammatory symptoms have subsided, the real nature of the disease is more unmasked, as in fever, and it is against this specific cause that mercury should be directed.

to the Pathological Society, mentioned certain cases of spasmodic asthma, in which a peculiar lymph sputa occurred, assuming the form of the air vessels, producing a state of asphyxia approaching suffocation, which instantly yielded to the full action of mercury on the system. Those interesting statements would appear to throw still further light upon the preceding observations. Whether it is necessary that the gums should become sore, in order to cure the disease, we are not prepared to state; we know infantile syphilis yields to the influence of the drug without salivation; but in all the successful cases of hooping-cough we have witnessed, a decided impression was made on the constitution by the medicine.

The subject is, at all events, worthy of the consideration of physicians; and if it should lead to any useful result, in the hands of men of higher attainments, and more experienced, the end of the writer will be fully attained. At present there is no remedy we can depend on; therefore it is but candid to give any mode of treatment, however novel in its character, a cautious trial; and if further observations should corroborate the testimony of the foregoing article, numbers of little sufferers from hooping-cough will be not only snatched from the present danger attending the disease, but saved from the fearful catalogue of chronic affections so frequently found to be its sequelæ.

BIBLIOGRAPHIC NOTICES.

Elements of the Practice of Medicine. By CHARLES LENDRICK, M.D., T.C.D., Queen's Professor of the Practice of Medicine, &c. Dublin, 1840, Part I. pp. 123. Price 3s.

We have been long of opinion that an elementary work like the present is much wanted in our medical schools. Among the numerous questions proposed to lecturers by students, there is none more difficult to answer than, "what book do you recommend on the practice of medicine?" and although it is impracticable to derive the requisite amount of even literary information, without the perusal of several works, it is certainly possible to convey the general principles to the pupil's mind, more concisely, and in a more condensed form, than has been hitherto done.

Dr. Lendrick professes to complete the work in *about 500 pages*. There are to be three parts, each comprising a distinct class of disease, and so far, complete in itself. The author apologizes in his preface for the omission of some diseases: this is in our opinion unnecessary. Neither he nor any other person could describe all the morbid states to which the human frame is subject. "Disease" is but an artificial arrangement and nomenclature, not always corresponding with nature, omitting much, and frequently erring as to distinctions and analogies. It is not, therefore, any recommendation in a work, that it rigorously details all the items found in a nosological chart; and it seems to us to be more practically useful, in the words of our author, "to compare and connect than to describe individually and minutely."

The synopsis at the commencement of the work explains the arrangement. After an introduction explanatory of the morbid actions, the subject is divided into three distinct departments, illustrating the effect of these morbid actions in producing three great classes of disease. The first (contained in the present

publication) being such as do not necessarily (although they may accidentally) affect any particular structure or organ; this includes the various kinds of *fever*. The second part is to contain structural diseases, with those of the cellular tissue, the skin, glands and joints. The third, which will be the largest, is to comprise organic affections.

The morbid actions, irritation, inflammation, &c. are succinctly described in about thirty pages. The following are the author's remarks on the question of inflammation being a necessary part of the healing process.

"The reparatory process is undoubtedly effected by means of the effusion or organization of fibrine, and apparently, this cannot take place without inflammatory symptoms; just as other extraordinary actions of the vital powers are necessarily accompanied by local or constitutional disturbance."—p. 29.

The author, we think, acts judiciously in using the established names for disease, although not always the most correct. The object of an elementary work is to afford instruction, and to be understood; and this is certainly not accomplished by making changes in the terms to which the student has been in the habit of annexing his conceptions; at least so long as the existing expressions can be used with any propriety. The Cullenian division of fever, into synocha, synochus, and typhus, is accordingly maintained, but the author introduces "*irritative*" fever under a distinct title. The following is his description of its characters.

"There is generally observed, even from the first, an inconsistency in the symptoms; some denoting apparently an advanced stage and severe form of typhus fever, and others existing as at an early period. Thus, bad symptoms are prematurely displayed, and those that indicate a state almost of health, remain till near the time of death. Violent pain in the head, without the vascular excitement of phrenitis; convulsions and other proofs that the cerebral functions are seriously involved, unaccountably take place, and as unaccountably subside. It is often at a future period, when dissolution is impending, or has occurred, that the practitioner ponders on these melancholy presages of the fatal event.

"The patient frequently presents a levity of manner, and a jocularity of expression, altogether unnatural in his situation. Sometimes he is gloomy, contemplative, unwilling to be disturbed, and gives pettish, brief, and unsatisfactory answers to the questions proposed to him, especially as to his health. Occasionally his deportment is sad, and he announces a firm conviction, not only of the fatality of his case, but of the precise period of the catastrophe; a foreboding often realized by the result. Violent delirium may attend

the disease, but more commonly it is of moderate amount. At this time it will be frequently discovered, during incoherence, that some matter connected with the patient's private affairs, or perhaps an hallucination, had been making a deep impression on his mind."—p. 115.

The notes contain several useful recipes, with practical remarks as to the details of the sick chamber, and which could not so well be introduced into the text, without interrupting the order and arrangement. The work is cheap, and got up in a manner highly creditable to Messrs. Hodges and Smith, and to the University Press.

The Eye.—A Treatise on the Art of preserving this Organ in a healthy Condition, and of improving the Sight, &c.
By J. CH. AUGUST. FRANZ, M. D., &c.

THIS is a book of great interest not only to the Profession, but to philosophers in general, and, we have no doubt, will be sold extensively. It is well, nay, even elegantly written, and this is the more surprising as the author is a foreigner. It is very rare that Germans or Frenchmen acquire such a command of idiomatic English as Dr. Franz. The book treats of the anatomy, physiology, and physiognomy of the eye, and of the methods necessary for preserving the eye in a healthy condition, of improving the sight, and of managing ophthalmic diseases in their incipient stage. The most original part is the *physiognomy* of the eye, and from this we shall make a few extracts, as a specimen of the work.

Speaking of the expression of the eye as indicative of character, Dr. Franz observes:

"The particular character of the look is determined partly by the motion of the eyes, and partly by the axis of vision. The various motions of the eyes, taken by themselves, however, impart to the look merely something of an inferior character belonging to our animal nature; the higher, more expressive, and intellectual character, on the other hand, is conferred upon it by the direction which the axes of vision assume. The axis of vision is a horizontal line passing centrally through the pupil and globe of the eye. If we imagine this line to be continued forwards from each eye, the two lines either run straight forwards at an equal distance from each other, which is named the *parallelism* of the axis of vision, or they converge towards each other, and then meet together at a certain distance in front of the eyes: the point at which they cross is named the *point of convergence* of the axis of vision."—p. 75.

"An almost perfect parallelism of the axes of vision is observed in that look which is entirely void of mental expression, but in an expressive look the axes always converge more or less. The degree of convergence of the axes will therefore serve as a basis for three distinct differences which we have to observe in the look, as determined by the axes of vision only; thus, the point of convergence either exactly *coincides with the object* looked at, or *falls short of it*, or, lastly, *lies beyond it*. The *sensual* look has its point of convergence always before the object; and if this point lie very near to the eyes, the look is fixed or rigid, and, in many instances, the eyes may even seem to squint. The *contemplative* look has its point of convergence at different distances behind the object. When this point lies at a fixed and determinate spot behind the object, the eyes appear to look through the object, as it were, and the look thus becomes what is termed open and reflective."—p. 76.

"In the *intelligent* look the point of convergence coincides exactly with the object. When it rests upon the object the look becomes keen, investigating."—p. 77.

But this is only a part of the machinery of expression; for,

"Secondly, the look is determined partly by the motions of the eyeball, as has been already mentioned, and in this there are three points to be attended to, viz.—1. Whether the motion is accomplished with difficulty, or with ease and decision. 2. Whether it extends itself upon a large or narrow field of view. 3. Whether it is performed in a straight or in a curved direction, while the eye is passing from one object to another. When the eye performs its motion heavily, within a limited field, and passes in straight lines from one object to another, the look has always something unpleasant and repulsive to the observer. When, on the contrary, the eye moves with ease and freedom, taking in a large field of view, and passing from one object to another with a curved motion, the look has always something pleasing and attractive. Porta, speaking of that kind of look in which the eye moves with a freedom which delights the beholder, thus expresses himself: '*gli vechi si morano come l'acqua nel vaso.*'"—p. 78.

"The eyelids, both in their repose and their various motions, and more especially the shadow which falls upon the eyeball, from the edge of the upper lid and its lashes, have an influence by no means inconsiderable upon the look. A shadow falling deeper, or covering an unusually large surface of the cornea, always gives to the eye an expression of softness. Such shadow may be occasioned either by the head habitually bending forward, the eyeball still remaining horizontally poised; or, where the head itself is carried erect, by the upper eyelid actually drooping, tremulously or steadily, down upon the cornea. The lower lid, on the other hand, is sometimes drawn upwards, by which a certain charm or attractiveness is imparted to the eye."—p. 80.

Now, having analyzed the machinery by which expression is given to the eye, we may proceed to consider its operations, as indicative of certain qualities of the mind :

“The eye of the man, in whom the understanding ordinarily predominates, moves calmly, firmly, passing in curves through a field of moderate extent, from one object to another. The look is pleasing, steady, intelligent, and even keen.”

“The eye of the man, in whom the feelings predominate, performs its motions easily, but somewhat more slowly, within a larger field of view, and in a curve, the convexity of which is more frequently turned upwards than downwards. The look inclines to fixation, but is pleasing, contemplative, or even reflective, and steady ; sometimes, however, it is fluctuating, flickering, indicating the inward workings and emotions of the mind.”—p. 83.

“The eye of the man, in whom the *will* predominates, has great freedom of motion in all its parts, which manifests itself by quick, fierce, and, for the most part, rectilinear motions, within a very large, that is to say, a very wide field of view. In the moments of impatience and excited expectation, which so often occur in men of this character, the eyeballs are sometimes found in a state of horizontal oscillation. The look is not pleasing—almost repulsive ; it is intelligent, seldom steady, but rather fluctuating, and, when fixed, becomes piercing ; appearing in some degree, therefore, to offer defiance.”

“In the eye of men of *talent* and of *creative genius* the expression seems to be a mixture of that manifested under the three former characters. The motions of the eye are easy, free, firm, curved, unfettered, embracing an extensive field of view. The look is pleasing, attractive, either intelligent or contemplative, open, thoughtful, penetrating.”—p. 84.

The expression of the eye, as indicative of the various emotions, or the habitual disposition, is fully investigated by Dr. Franz, and his remarks show both acute and extensive observation. The practical uses of his investigations are clearly pointed out ; and although we all more or less act upon them, it is without any distinct consciousness. We shall extract his remarks upon the use to be made of the physiognomy of the eye, in medico-legal inquiries :

“Lastly, the study and knowledge of the indicative character of the eye, is of the greatest importance in the inquests and *post mortem* examinations held on the bodies of persons who have been murdered ; if the person who has committed the crime, or who has been concerned in it, is present in the house or apartments where the examination is carried on. If, in such cases, an individual is observed to look round in an anxious, uneasy, confused manner, at one moment with a sad and dejected air, and at another with affected unconcern or forced cheerfulness ; if there is an unusual bustling activity and restless-

ness in his manner, it may in general be fairly suspected that he is either the actual perpetrator of the deed, or has been at least an accessory, and is consequently arraigned at the bar of conscience. The eyes here always give the first intimation of guilt. The physiologist must certainly observe with especial care and attention the eyes, as well as the countenance and behaviour of that person."—p. 128.

The style of the work is sufficiently shown in the few extracts which have been given; the remaining chapters are fully equal to those from which our extracts are taken, and will amply repay a perusal. If our recommendation be of any value, we strongly advise the purchase of this little volume.

A Treatise on the Diseases of Infants, &c. By C. M. BILLARD, M.D. Translated from the French, by JAMES STEWART, M.D., of New York.

THE original work of M. Billard has long held the highest rank among treatises on diseases of children, in this country, though there are many to whom it has hitherto been a sealed book, from their ignorance of the French language. This difficulty is now overcome, and in a way to enhance the value of the work, for it is not merely translated by Dr. Stewart, but enriched with an appendix of valuable comments upon M. Billard's descriptions, supplying occasional deficiencies, and affording the reader an opportunity of comparing disease, as it appears in France and America. The translation is a credit to the profession of America, and will make Dr. Stewart's name as favourably known in Great Britain as in America. In the matter of translations we might take a lesson from our transatlantic brethren. Few valuable books appear in France that are not translated by them into English, as witness the works of Meckel, Velpeau, Billard, and many others. We trust that Dr. Stewart will give us the excellent work of Valleix, on *Diseases of Infants*, in an English dress, as a companion to Billard.

It would be impossible to analyse such a work as Billard's minutely, within our limits. Most of our readers are aware that it is chiefly the result of his observations at the "*Hôpital des Enfants Trouvés*," and as such is most valuable, though some of his chapters on important diseases are too short and superficial.

In order to enable our readers to judge of the manner in which Dr. Stewart has executed his task, we shall extract some of M. Billard's observations on measles, with Dr. Stewart's notes in the appendix. We have chosen this subject because

it is treated briefly, (rather too much so indeed,) and because of the interest naturally attached to a prevailing epidemic.

"Rubeola or measles, the anatomical characters of which have been already described, is remarkable for the febrile state which accompanies it, and for its complications. The most common of these are inflammation of the trachea, bronchi, and lungs. The digestive organs are less often affected in the course of this eruption, and the cerebro-spinal apparatus does not become the seat of any derangement, except in certain individuals. At least this is the result of the examination of the nature and history of this epidemic in different countries, by a great number of physicians, particularly Sydenham, Mead, Morton, Pinel, and others.

"Measles appear to be more common after than before the first dentition, for at the Hospice des Enfants Trouvés, those above the age of eight or nine months are those more affected with the disease. M. Baron has for several years remarked this; and during the year 1826, in six children attacked with it, there were four above the age of eight months. Three of them died; two from acute hydrocephalus, and the third from a severe pneumonia. M. Baron has remarked, that anginose and cerebral affections were the most ordinary complication of measles in children at the breast. The symptoms of gastro-enteritis are always of less importance when they exist, and they often do not show themselves until the end of the disease.

"Other complications of measles, such as petechiæ, appear in adults. As to its terminations we would observe, that in young subjects, the cutaneous eruption is very frequently followed by anasarca, or desquamation; the former termination, without doubt, is attributable to the little vital reaction, and to the natural slowness of the passage of the blood in patients who have been debilitated; the latter to the facility with which the epidermis exfoliates in infants.

"The treatment of measles must vary according to its complications. It is observed that these have been different in different epidemics; from this, no doubt, arise the predilections of certain authors for a favourite method of treatment. From this cause it is that some are so partial to emetics. Thus Pinel, who had only seen it prevail at the Salpêtrière in a very mild form, has recommended the expectant method, whilst Mead has advised bleeding as a remedy of universal application.

"If the danger of measles is considered as arising from the nature of the complication, we should direct our attention to this accompanying disease.

"The drinks which have been recommended as suitable to favour the development of the eruption ought to be administered with great caution. In case of metastasis, the warm bath appears to me very proper to restore the cutaneous irritation. Of this we must be very careful, should cerebral congestion supervene in the child. Emetics, when there is reason to believe the existence of gastric derangement, and purgatives when it is necessary to relieve the bowels, should be

given with much caution in young children in whom the alimentary canal is one of the parts most susceptible of irritation. We should also be careful in the use of remedies for the relief of debility, to which patients with measles are sometimes subject. Tonics are only useful in a state of extreme debility and marasmus, occurring after measles, and when they are not counter-indicated by any organic lesion."—pp. 101, 2.

In the appendix there is a valuable note upon measles, by Dr. Stewart, from which we shall give the following extracts :

"As the slight excitement may increase, no one being able to foretell the continuance of the same condition, (catarrhal symptoms,) the physician should be prepared to meet it in all its forms, whether of increased vascular excitement, or of local inflammation, or of congestion. When the former of these conditions arises, the use of diaphoretic medicines, combined with an expectorant, is clearly indicated. Syrup of ipecacuanha, either alone or combined with a solution of extract of liquorice, or syrup of tolu, is a good combination for fulfilling this indication. As a general rule ipecacuanha is to be preferred to antimony in very young children ; for the debilitating effects of the latter are sometimes truly alarming, and have even been fatal."—p. 553.

"Upon the appearance of decidedly inflammatory symptoms in any of the viscera, sanguineous depletion must be adopted, to be proportioned to the degree of inflammation and constitutional vigor of the child. There is scarcely a disease which requires the loss of blood more than measles, when the lungs are inflamed, and it is the most effectual means of preventing the troublesome, and often serious cough which is one of the sequelæ of this affection.

"Emetics are often highly necessary to relieve the child from the accumulation of serous fluid so copiously effused in the air passages, when the lungs are inflamed and congested. Throughout the disease the bowels should be kept open by the use of mild aperients.

"The brain is sometimes seriously affected, showing itself in a drowsiness, from which it is difficult to arouse the patient, and the quantity of mucus closing the nostrils produces a kind of stertorous breathing ; an open condition of the bowels, stimulating baths to the lower extremities, will for the most part be sufficient for this symptom. If, however, there should appear much heat about the head, leeches will be necessary, followed by a blister between the shoulders.

"The cough is often exceedingly annoying after the inflammatory symptoms have been removed ; this is best treated by opiates, and the acetate of morphine, combined with syrup of squills, is one of the best forms in which they can be administered.

"It sometimes happens that the eruption is slow in appearing ; the face is pale and shrunk, and a difficulty of respiration, or profound stupor exists. In this congestive form every effort should be made to restore action to the circulating system ; and stimulating frictions,

warm baths, and blisters freely used to effect this object, while local bleeding from the congested part may be necessary. The same means ought likewise to be resorted to in cases of retrocession of the eruption. In addition to these, warm and stimulating drinks are recommended by Armstrong, Eberle, and others, and camphor or ammonia suspended in a mucilaginous fluid, are also advised by them."—pp. 554, 5.

We particularly recommend the introductory chapters, and the one on the viability of infants, to our readers; they contain a great amount of information, and will richly repay perusal.

We have no hesitation in expressing our unqualified approbation of the way in which Dr. Stewart has performed his task, and our wish for his complete success in its extended circulation.

A Treatise on the Nature and Treatment of Hooping Cough, &c. By GEORGE H. ROE, M. D., Fellow of the Royal College of Physicians, &c. &c.

THE work before us is a useful addition to the many valuable monographs we possess upon the diseases of children. Dr. Roe has given a very excellent 'resumé' of what is known of one of the most obstinate and fatal of these diseases. His descriptions are clear and concise, and his conclusions are those of a man of science and of cultivated mind. We could hardly expect much original matter in a work of the kind, but the author has done what is quite as useful—he has collected a great mass of evidence from other writers, and added thereto much that is valuable from his own experience.

This, however, is not the sole object in view. Dr. Roe wishes to recommend to the Profession a remedy which in his hands has been so successful that he terms it almost a specific.

The aim and scope of the work will be perceived by the contents of the chapters as given in the index. Ch. I. Introduction. II. Nature and Progress of Hooping Cough. III. Morbid Appearances. IV. Explanation of the Symptoms of Hooping Cough. V. Cause and Seat of Hooping Cough. VI. Contagious Nature of Hooping Cough. VII. Treatment according to different Authors. VIII. Simple Hooping Cough—Cases. IX. Complication with Bronchitis—Cases. X. Complication with Pneumonia—Cases. XI. Complication with Hydrocephalus—Cases. XII. Complication with remittent Fever. XII. General Rules for the Treatment of Hooping Cough. In an Appendix we have Hints on the Management of Children during Infancy.

We shall make a few extracts, in order to enable our readers to judge of the execution of the work.

“ Hooping cough sometimes commences with the symptoms of an ordinary cold, which continues for two or three weeks without attracting attention. At other times it is ushered in with the usual symptoms of an acute bronchial affection. In neither case has the cough, at its very commencement, any characteristic by which it can be recognized. Soon, however, it is perceived that it comes on in paroxysms, that the expiratory efforts of coughing are made with more frequency, rapidity, and violence, and that they are followed by one deep drawn full inspiration. After a very short rest, these unusual respirations are repeated, and the forced inspiration again follows; and these continue alternating with each other until the paroxysm is ended either by expectoration or vomiting.”—p. 7.

Many cases run through the disease without the whoop, but none without the characteristic expiration, and we are disposed to regard it as more pathognomonic than the whoop. After a week or two the febrile symptoms abate, and then the whoop is generally heard.

“ The cough is at first dry, and the fits of coughing are then long and distressing. After it has continued some time expectoration comes on, when the paroxysms become shorter and less severe.”
“ The fits of coughing continue from one to fifteen minutes: they recur at longer or shorter intervals, according to the severity of the attack; and are more frequent and violent in the night than in the day. During the paroxysm the pulse is very much accelerated, the respiratory function is completely interrupted, and in very bad cases the blood is forced from the nose, eyes, and ears by the violence of coughing; the conjunctiva is tinged with blood, and the appearance of the face resembles that of a person convulsed with epileptic fits.”
—p. 9.

Variations from the ordinary progress of the disease, and the general disturbance occasioned by it, are carefully pointed out by Dr. Roe. The physical signs are quoted from Laennec.

As to the fatal consequences of the complaint, the author justly observes:

“ The complaint seldom destroys by its own violence; when it proves fatal, it does so by producing other diseases. The most common effect of the long continuence of the cough is inflammation of the lungs or bronchiæ. When symptoms of these affections make their appearance the child can only be saved by the prompt adoption of measures calculated to remove them, for they will not subside of themselves.”—p. 13.

“ But there are other causes from which death may ensue,

when to the eye of the most anxious parent, the condition of the child seems every day improving. It often happens, when the cough is so slight as to attract little attention, that a child is suddenly seized with a convulsive fit, after which the cough and whoop cease altogether, and he is left in a state of insensibility. Some hours after, a second fit attacks the patient; a third soon follows; and thus they continue succeeding each other at intervals which gradually become shorter and shorter, till one of the fits puts an end to his sufferings."—p. 14.

Typhus and remittent fever are also said to occur with hooping cough, but such cases are extremely rare, and are rather accidental occurrences than natural consequences of the disease.

Dr. Roe has given a number of cases with the results of *post mortem* examinations, but these throw light only upon the fatal complications, without in the least elucidating the nature or seat of hooping cough.

The chapter on the cause and seat of hooping cough is very good, it contains an abstract of the views of different authors, with a few lines pointing out their inadequacy. Whether we suppose the disease an inflammatory affection of the larynx, bronchiæ, or lungs, (*Watt, Alcock, Marcus, Broussais, Boisseau, Guersent, Rostan, Dugès, &c.*) or some affection of the nervous system, (*Webster, Leroy*), or the two combined (*Desruelles*), or inflammation of the pneumogastric nerves (*Breschet, Autenrieth, Kilian, Albers, Pinel*), we shall find undoubtedly much evidence in our favour, but when we examine closely and reason accurately, we shall discover that none of these views are strictly applicable.

"From the review which has been taken of the various opinions which have been quoted, it sufficiently appears, that to designate any particular complaint as the cause of hooping cough, because it is observed frequently to precede or accompany its commencement, is a mode of reasoning which is inadmissible."—p. 61.

"All we can hope to discover, is the first effect of the disease,—its real cause is, and without some addition to the means of investigation which we at present possess, must ever remain unknown."—p. 65.

In Chapter 7th we have an account of the medicines which are in chief estimation for the treatment of the disease, such as opium, lactuca virosa, emetics, acetate of lead, hemlock, cantharides, arsenic, belladonna, narcissus, sulphuret of potash, laurel water, hydrocyanic acid, embrocations, vapor of tar, &c. Much valuable information is given, for which we must refer the reader to the book itself, as we prefer extracting from the

next chapter the treatment of simple whooping cough by hydrocyanic acid according to Dr. Roe's plan.

"The only organic affections which we can discover in these simple cases, are a slight catarrh and a spasmodic constriction of the bronchial tubes; the most urgent symptom is the cough. The indications, therefore, to be followed, are, to restore the mucous membrane to its healthy state, to subdue the spasm, and to allay the cough. In the early stage of the complaint, whilst its nature is still doubtful, warm mucilaginous drinks, with a combination of extract of hemlock and ipecacuanha wine, in doses of one grain of the former, and three or four drops of the latter, usually relieve the catarrhal symptoms; but they very rarely either cut short the disease or prevent the accession of the whoop. The medicines which have proved most effectual in fulfilling the indications abovementioned are, hydrocyanic acid, combined with ipecacuanha, or tartarized antimony. Two or three days after their exhibition, the violence of the paroxysm is perceptibly diminished and its duration shortened; and at the end of five or six days the whoop usually ceases. The intervals between the paroxysms grow longer, and at the end of a fortnight, if the weather be warm, and the general treatment recommended at the close of this treatise be adopted, they will in many cases only return in the mornings and evenings. The dose of hydrocyanic acid for an infant is about three-quarters of a minim of Scheele's strength, gradually increased to a minim, which may be given every fourth hour; for a child of three years of age about one minim, gradually increased if necessary to a minim and a half, every fourth hour; for children of ten or twelve years of age, a minim and a half, increased to two minims every fourth hour. It is safer to give this medicine in small doses at very short intervals, than to run any risk of producing too great a depression by a large dose. The frequency of its exhibition must depend upon the strength of the patient and the severity of the attack. The dose should be repeated when the effects begin to subside, which in mild cases generally happens in three or four hours; but when much fever is present, its influence is felt but a very short time; under such circumstances, a larger quantity may be given and at shorter intervals, without any apprehension of danger, so long as the fever lasts. In some very severe cases when the pulse was up to 120, with a good deal of fever and a very hot skin, I have given to a girl of ten years of age a minim and a half of this medicine every quarter of an hour for twelve hours; at the end of twenty-four hours she was free from fever, and her strength was not in the least reduced by the effects of the remedy. As some catarrhal symptoms are generally present, a few drops of ipecacuanha or antimonial wine, may be advantageously combined with the hydrocyanic acid, but the latter alone possesses the power of curing this formidable complaint."—pp. 89, 90.

"Sometimes the cough, after pursuing its ordinary course for some time, will again become hard and dry, and the paroxysms will

terminate without expectoration. Such cases are most relieved by giving, in addition to hydrocyanic acid and antimonial wine, a small quantity of laudanum or liquor opii sedat.: for an infant, the dose of the former is about three-quarters of a minim, of the latter, half a minim every fourth hour, and for older children larger doses in proportion to their age."—p. 91.

Very judicious directions are given for the "management of children" during this formidable complaint, and valuable practical information on the treatment of the complications, but our limits compel us to close this notice. Detail is the less necessary, however, as we are sure that Dr. Roe's book will find its way into most libraries. It is undoubtedly the best work in our language upon the subject.

Medical Report of the House of Recovery and Fever Hospital, Cork-Street, Dublin, for two Years, from 1st January, 1837, to 31st December, 1838. By G. A. KENNEDY, A. M. M. D., M. R. I. A., President of the College of Physicians, &c. &c. Dublin, 1839: pp. 94.

FROM an early period of the foundation of this great institution, to which Dr. Kennedy is one of the Physicians, annual Reports of the Hospital have been published, giving, or professing to give, an account of the type of the prevailing fever, the best mode of treatment and prevention, with such statistical returns as the respective authors chose to insert. With a few remarkable exceptions, however, these Reports have not been deserving of any important place in our medical records. They are meagre in details; they scarcely exhibit any marks of original research; they are almost wholly deficient in observations from dissection;* and are generally eked out by a few uninteresting cases, and often-repeated observations on the misery of Ireland in general, and of the liberties of the Earl of Meath, in particular.

The Report now before us is, we are proud to say, a document of a different order; it shows its author to be a physician of great authority, and must always hold a distinguished place in the medical literature of this country.

* This circumstance was owing to the existence of a regulation of the Governors of the Hospital prohibiting *post mortem* examination!! We have heard that this rule has lately been modified or abolished; and we may now hope that the contributions from this noble hospital will equal those of its sister institutions. If there is an institution in which the regular performance of dissections is absolutely necessary, with a view to successful treatment, it is an hospital for fevers and acute diseases.

During the year ending in March, 1839, 4,612 patients were admitted into the Cork-street Hospital; the average number of days of each patient's stay in hospital being $15\frac{1}{2}$ days, and the deaths averaged at $22\frac{1}{4}$ per month, giving a total of 269 for the year.

It will convey some idea of the prevalence of fever among the lower orders in Dublin, during the last six years, to state, that the applications for admission to the Cork-street Hospital, for that time, were not less than 35,905.*

Dr. Kennedy commences with some observations on the influenza of 1837, which prevailed extensively in Dublin. The following remarks are valuable:

"It has been questioned whether two epidemic diseases ever prevail contemporaneously in the same locality. The author can here only remark, that the one he has detailed was preceded, accompanied, and followed by typhus fever, which, in intensity and in the numbers attacked, nearly equalled any which has been recorded in the history of this hospital. The same occurrence was observed in the epidemic catarrh which prevailed in Ireland in 1803, as recorded by Drs. Moriarty and Patterson; and it is stated by Ozanam, that at Lausanne, (I forget the year,) a town comprising six thousand individuals, the progress of an epidemic catarrh was so rapid, that two thousand persons were seized in the first fifteen days of its appearance; that it was accompanied by an inflammatory fever; and that the epidemic was followed by a malignant fever, of which so many individuals of all ages died, that the mortality was quintuple the ordinary rate."—p. 13.

As the influenza declined, the typhus fever, which seemed to be somewhat moderated during its prevalence, increased, and exhibited all the characters of low essential fever, with its usual train of adynamic symptoms. Its duration was protracted, relapses rare, and a great number of children were attacked. The author says:

"Thus, by a reference to the table, it will be found that so large a number as 1847, under the age of fifteen, were discharged during the year; and the author has never witnessed so many cases of genuine typhus, accompanied with extensive petechial eruption, as occurred even in those under the age of five years.

"This was also noticed by Dr. Barker in the epidemic in 1817. In his truly valuable Report for that year he states, 'that persons between the ages of ten and twelve years constituted the largest number

* We have not got the numbers of applicants at the Hardwicke, Sir P. Dun's, the Meath Hospital, and Stevens's Hospital.

of the admitted: at the beginning of the epidemic the proportional number of children attacked was greater than during the winter, and again increased towards summer.' And in referring to the tables, he observes that, in forming deductions from them, we should avoid the error so frequently committed—of inferring an exact correspondence between the prevalence of disease at different ages in society at large, and in the hospital; for, though we know with exactness the *total* number of sick in society at the different ages, still the proportional number of persons *living* in society at these ages might be different from that of the sick." pp. 15, 16.

With reference to the petechiæ, Dr. Kennedy thinks that we may obtain some useful hints by attending to the appearances of the eruption:

"The earlier (says Rogers, on Epidemic Diseases, page 7,) these petechiæ appear, the fresher in colour, and the longer they continue out, the better. The happy issue of the disease very much depends on the three last circumstances.' 'Tutiores etiam habentur, quæ discretæ, circumscriptæ, latæque sunt, ordinatimque in superioribus primum partibus, deinde sensim ad plantas usque pedum efflorescunt, et læte rubent, et diu extant, nempe sex, septem, octove saltem dies, et demum paulatim pallent, flavent, lenteque evanescent.'"

"My experience in several epidemics, where petechial eruptions were prevalent, fully attests the accuracy of the above observations, I have observed, however, if the eruption is coeval with the fever, (that is, occurs on the first day, in those cases which commence *uno actu*,) that it is not a favourable symptom. Again, where the eruption re-appears, and becomes vivid at the termination of fever, when it had previously declined, that it frequently denotes an unfavourable issue. The practitioner should not be misled by those cases where, having found them to decline on the chest and extremities, he thinks that they have re-appeared on an examination of the back: it is the position of the patient which has retarded the evanescence of the eruption in these cases."—p. 16.

We cannot subscribe to the opinion of Dr. Harkan, as quoted by the author, that the existence of petechiæ affords a test as to the contagious nature of the fever. Dr. Harkan has never seen a case of contagious fever that did not present petechiæ or vibices; so that, in his opinion, the absence of petechiæ indicates the non-existence of contagion. We have had several opportunities of observing cases of contagious fever without the slightest appearance of petechiæ, either in the case which gave or that which received the contagion; and it is not unfrequent

to observe, in families in which many members have sickened from the one contagion, that some of the individuals will exhibit the petechial eruption, while others shall remain free from it, through the whole course of the disease.

Dr. Kennedy has recorded a great number of observations on the temperature in fever, and the rapidity of the pulse and respiration. The temperature was ascertained by passing the thermometer under the tongue, and allowing it to remain there till the mercury had attained its maximum elevation. The following table we extract, showing the temperature in 325 cases. The lower line refers to the number of cases :

93	94	96	97	98	99	100	101	102	103	104	105
1	2	11	5	30	6	71	60	53	40	39	7

These observations are quite original: there is certainly no such series of accurate observations on record. In the accurate work of Louis,* where he speaks of the temperature, it is curious enough that not a single thermometrical observation is given. We must consider Dr. Kennedy's researches on this subject as constituting a most important addition to our knowledge of the phenomena of fever.

In the table exhibiting the frequency of the pulse, in 323 cases, we find the rate to vary from 60 to 130 in the minute. The greatest number of observations, nearly one-fourth, exhibit the pulse at 120—an interesting fact, which our own experience tends strongly to confirm. In the fever which has existed here for the last few years, however, still greater variations of pulse have been observed. We have repeatedly observed cases with the pulse at 160. In several of these recovery took place; and, on the other hand, we have found the pulse below 60, even while fever existed, and actually sinking below 40 for several days during convalescence.

The following observations on gangrenous ulceration of the mouth are so important, that we gladly transfer them to our pages :

“Gangrenous ulceration of the mouth occurred in more than one instance in the months of May, June, and July. In the cases Nos. 5 and 74 in the table, of the respective ages of seven and twelve years, the fact was first noticed by the swelling of the external cheek ;

* *Recherches Anatomiques, Pathologiques, et Therapeutiques sur la Maladie connue sous les noms de Gastro-Enterite, Fievre Putride, Adynamique, &c.* 1829.

in the former, during the progress of as malignant typhoid fever as I ever witnessed. In both the disease was arrested by the application of the nitro-muriatic acid, by means of a hair pencil to the gangrened surface, with camphorated spirit applied to the cheek externally; and the exhibition of wine with sulphate of quinine. The other cases occurred in the practice of my colleagues: one proved fatal in a young man of the age of eighteen; the disease appeared during his convalescence from fever, and in addition to the lining membrane of the mouth, an ulcer formed on the external cheek, which rapidly extended, and assumed the appearance of the most malignant form of *cancrem oris* occurring in children.

"Although the two following cases occurred several years since, the author is induced to insert a short abstract of them here, as they possess some interest, and also as he is enabled to accompany them with a faithful drawing of the disease.

"Ann Proudman, aged 7. On Sunday, December 17th, 1826, (being then in the 20th day of fever,) her mother observed a foul black ulcer on the lining membrane of the right cheek, with a black spot on the tip of the tongue; this last sloughed, and presented a clean and healthy looking ulcer on the 20th. When seen for the first time at the dispensary, the right cheek was much swollen and inflamed; the mucous membrane presented a gangrenous ulceration, extending nearly to the angle of the mouth, but without any communication with the external cheek, or with the membrane immediately lining the gums; attended with an extremely fetid odour. On the 21st a speck, resembling in every respect a spot of petechial purpura, appeared on the outside of the cheek, corresponding to the ulceration on the mucous surface, which, on the 22nd, had increased to an ulcer of the size of a shilling, exhibiting a dark, black spot in the centre, and a yellowish circular margin; this rapidly advanced in a circular direction to the size of a dollar, and on the 28th had made a communication with the internal surface; after this it spread more irregularly, and exposed the alveolar process of the upper and lower jaws, and extended to the orbit. The constitution sunk rapidly under a diarrhoea, and she died on the 3rd of January.

"On the 13th of August, 1829, Mary Proudman, sister to the above, also aged seven years, was brought to the same institution, when her mother stated that she had measles about six weeks since, previous to which she complained of pain in the left jaw, which was attributed to cold, with swelling of the left cheek; in a week after the swelling she perceived an ulcer of an extremely fetid nature on the lining membrane of the lower alveolar process, which has been gradually extending, now nearly five weeks, to the upper, and to the side of the tongue, with great flow of saliva. The progress of the disease in this case was arrested before ulceration had extended to the outer surface, by the application of the nitro-muriatic acid, mixed with a little honey; with bark administered internally, and by an allowance of wine, and under a generous diet she ultimately recovered.

"The coincidence is not a little remarkable of the two cases occurring in the same family, during a febrile attack, and at the same age.

"Writers of unquestionable authority have attributed this disease to the use of mercury. The author does not mean to assert that the gangrenous erosion of the cheek may not be produced in this way; on the contrary, he believes it often is; but he has had the most conclusive proof, both in the epidemic of which he is now speaking, as well as in former ones, that it may also occur in typhus fever in cases where a particle of mercury has not been administered. These facts should suggest a salutary caution to those practitioners, who, in the management of typhus fever, without sufficiently attending to the nature of the existing epidemic, adopt a delusive simplicity of treatment, first lowering the system by the use of the lancet, and then, to use their own expression, 'touching the gums with mercury.'"—pp.25-28.

Our next extract will show that Dr. Kennedy is unbiassed by any peculiar or exclusive theory of fever. He is an eclectic physician, in the fullest sense of the word, a circumstance adding no little weight to the value of his observations and statements.

"As it has been impossible to assign a cause to the development of the epidemic, so it is not in the author's power to indicate the adoption of any fixed method of treatment. It has been well remarked that theory has at all times exerted a most pernicious influence over medicine; and probably a greater number of individuals have fallen a sacrifice to the many prejudices of which it is productive, than have at any time recovered in consequence of the advantages it affords.

"The author, in the treatment of the numerous cases in this and some former epidemics, has been influenced by no theory as to the cause of fever. He has been guided in each case by a consideration of the whole assemblage of symptoms. The author by no means intends to assert that the mode of treatment in fever is a matter of indifference; on the contrary, he thinks there are fewer diseases in which medical skill obtains more decided triumphs, but he believes that the only sure guide is enlightened experience.

"Although the treatment of fever varies greatly in different cases and stages of the disorder, yet certain principles of cure are applicable to fever in general; these principles have been so often detailed in former Reports from this institution, that the author deems it unnecessary to do more than refer to these, and more especially to the valuable writings of that able pyretologist, Dr. O'Brien.

"With respect to the practice pursued during the past year, the author seldom had occasion to employ general blood-letting; the application of leeches to the head, with tepid sponging, and cupping when the chest was engaged, having proved sufficient in numerous instances to moderate the symptoms. In some of the cases of diarrhoea

which occurred in the progress of fever, and during convalescence, the application of a few leeches to the umbilical region was found beneficial. Blisters were applied where a tendency to coma appeared; they were injurious, however, in those cases where great irritability of fibre existed; and in many cases sent to hospital, when epispastics had been applied on the complaint of headach, their application proved a more positive injury than a large depletion. Opium was prescribed in the form of Dover's powder, in cases of typhus complicated with the different shades of delirium tremens; and in cases where great excitability existed, with pervigilium, for two or three nights in succession, a full anodyne was given, having premized depletion by the application of leeches to the temples. There is no remedy, in the author's opinion, which requires more discriminative observation than the employment of opium in the treatment of fever. Wine has been freely used during this epidemic; the average quantity prescribed by the author and his colleagues, seldom exceeded eight ounces in the twenty-four hours. It has been justly remarked that wine is sometimes a better hypnotic than opium. An illustration of the type of fever is afforded by the quantity of wine consumed in one month compared with the corresponding month in 1838; thus, in June, 1837, the quantity of wine consumed was 4562 ounces; while in the same month, 1838, the quantity was only 1352 ounces.

"With respect to the pathology of this epidemic, the writer regrets that his researches do not enable him to throw any light upon the darkness in which the pathology of fever is involved. The only *post mortem* appearance that was at all constant, was congestion of the vessels of the membranes of the brain. But not only was this not invariable, but it is so frequently found in every form of death, where the agony is prolonged, that there can be no necessary connexion between it and the symptoms of typhus fever. In many cases it was accompanied by sub-arachnoid effusion, which was sometimes a limpid serous fluid; sometimes a layer of an opaque, whitish gelatinous matter.

"But if this epidemic typhus was not characterized by any uniform or constant pathological changes, it was very remarkable for the almost total absence of those abdominal lesions, which have been regarded by some as the invariable attendant of typhus fever. Indeed in this respect, this epidemic affords a striking and conclusive refutation of the false and hasty generalizations of the French pathologists on this subject. In this respect also it differs altogether from the epidemic fever of 1826, (which the writer had an ample opportunity of investigating, while in charge of fever patients supported at the expense of the Government at the Meath Hospital that year,) in which in a large proportion of the *post mortem* examinations made by him, more or less disease of the glands of Peyer was found."—pp. 38-40.

In observing on the table of mortality, Dr. Kennedy says:

"It appears from it that, in that year, 11,085 fever patients were admitted into the Dublin hospitals. Of these, 4,648 were admitted during April, May, June, and July, the period when the epidemic was at its height; and of the remaining 6,437, admitted in the eight other months, 1,030 were admitted in January when the influenza prevailed.

"The total number of deaths was 1103, giving an average mortality of one in every 10 $\frac{1}{10}$.

"The relative number of males and females attacked, as well as the relative mortality of the two sexes, as exhibited in this table, is very remarkable and well worthy of attention. The number of males admitted to hospital was only 4,986; whereas of females there were 6,099. The total mortality of the males was 1 in every 8 $\frac{1}{2}$, while of the females it was only one in every 12 $\frac{1}{2}$, or,

In the males the mortality was 12 $\frac{1}{2}$ per cent.

In the females 8 $\frac{1}{2}$ do.

"The relative mortality of the different hospitals, as shown by this table, is a circumstance highly deserving attention, as well on account of the differences as of the agreements amongst them in this respect. Thus, while the mortality at the Hardwicke, Dun's, and the Meath Hospital was so high as one death in every seven; in Stevens's and the House of Recovery it did not exceed one in every twelve.

"There is no point in the history of fever respecting which we have more conflicting statements than this of the mortality in hospitals. It is usually supposed to depend on a great variety of circumstances, over which the physician has little or no control; such as, the extent of accommodation in proportion to the number; the facility or difficulty of admission into hospital; the ages to which admission is restricted; the character of the prevailing epidemic, and the period of its duration at which the observations are made. It seems, however, probable from the discrepancies as well as the coincidences in the rate of mortality in the Dublin Hospitals during the same epidemic, observed in the same periods of its progress, that this depends on fewer and more general causes than is commonly imagined. This view receives remarkable support from a consideration of the rate of mortality in the tents at the House of Recovery, Cork-street, as exhibited in the table. In these the patients were placed in apparently the same circumstances, and exposed to the same influences throughout the whole course of the epidemic; yet, nothing can be more variable than the mortality. Thus we find in May, 1 death only in every 12; in June, 1 in every 7; while in August, we have only 1 in every 19. That this did not depend on any variation in the nature of the epidemic itself appears in the highest degree probable, from a comparison of the rate of mortality in the tents and in the adjoining hospital. Thus in June, when the deaths in the tents amounted to 1 in every 7, the mortality in the house was so small as 1 in every 15.5."—pp. 43, 44.

We cannot help remarking, that in determining the comparative mortality of different hospitals, an essential element is the average number of days the patients remained in hospital; for we know that in fever hospitals where patients are allowed to remain after the fever has subsided, to recover or die, as the case may be, of the numberless diseases which are the sequelæ of fever, the mortality, as calculated from the whole number of deaths, will appear much greater than it really is, for the cause of death in these returns is not distinguished from fever. This element of calculation is given with respect to the Cork-street Hospital, but as regards the other institutions, whose returns exhibit so great a difference in the mortality, we have neither the average number of days the patients remained in hospital, nor is it stated whether the patients are allowed to remain in hospital to be treated for the acute and chronic diseases which are so commonly consequent on fever.

The paragraph which we have next to quote must be read with regret by every man of common sense and every lover of science.

"The writer has not entered into any minute detail of the pathological or *post mortem* appearances, nor thrown his observations on that head into a tabular form; inasmuch as his examinations were not sufficiently numerous to afford any very satisfactory results. The very laborious nature of his hospital duties during the prevalence of the epidemic; the want of a resident assistant, or even of a clinical clerk, students being excluded from the hospital; the immense labour expended in collecting the facts contained in the tables appended to this Report, a labour of which it is impossible to have any idea without going through it; together with the occupations of private practice, prevented him from making his researches on this head as extensive as he would have wished."

The existence of regulations such as the above, in the principal fever hospital of the metropolis of Ireland, and the most extensive, we believe, in the British empire; an hospital receiving a large grant from Government, and officered by experienced and zealous physicians, seems almost incredible. There cannot be a more erroneous opinion than the notion that the admission of pupils to the wards of an hospital produces discomfort to the patients, or is in any way injurious to them. On the contrary, there is nothing more calculated to promote the advantage of the sick in hospital. The presence of a number of intelligent students is by far the most important stimulus to the physician, urging him to an active and earnest discharge of his duties. The wants and wishes of the patients are discovered and attended to. Extra attendance on the sick (so constantly required in a fever

hospital) is always at command. A thousand circumstances which escape the solitary physician in the routine discharge of his duties, are reported to him by the pupils, and the very presence of a number of benevolent and active students relieves the sick from the monotony of their confinement, and has the best effect upon them. To this point we have paid much attention, and we would ask those who are opposed to the admission of students, to compare the condition of the patients in a fever ward before the visit of a large class of pupils, most of whom have, as it were, made their own acquaintances among the sick, with that after the visit. There is the most striking difference: a new and wholesome stimulus has been administered, and the effect is too evident to be mistaken.

But what shall we say of the want of a resident assistant, and of clinical clerks? and what of the prohibition of dissection—a regulation worthy of the dark ages? Only this: that they constitute grievances which call for immediate investigation and redress, furnishing, as they do, a proof of the evils which spring from entrusting the government of our hospitals to non-professional men, whose habits, education, and prejudices too often unfit them for so peculiar and important a duty.

The limits to which we are confined in this Journal do not permit us to extend this imperfect notice of Dr. Kennedy's Report. At the present time, when so many investigators, unbiassed by theory, are adding to our accurate knowledge of fever, Dr. Kennedy's work will be gladly received by every true pathologist and practical physician.

Observations on the Inoculation of Syphilis. By Mr. ACTON.

WE beg to call the attention of our readers to some interesting papers on Syphilis, by Mr. Acton, published in the *Lancet*.* One of them is devoted to the "Employment of Mercury in Syphilis;" the other two treat of a topic that has hitherto received but little notice from the Profession in Ireland—viz., "Inoculation in Syphilis. We had the advantage of making the acquaintance of Mr. Acton in Paris, and we can bear full testimony to the indefatigable zeal with which he cultivates the extensive field of observation he there possesses. He has col-

* November 30, January 4, March 7.

lected some most beautiful drawings, presenting every stage of the process of inoculation; and from a careful examination of these, and of several patients we saw inoculated by M. Ricord, at the *Hopital du Midi*, we are able to confirm the accuracy of Mr. Acton's descriptions. He says:

"Previously to entering upon the study of inoculation, I shall notice briefly the characters of the sore from which the secretion should be taken. Every venereal ulcer, indiscriminately, does not furnish a secretion which, on inoculation, will produce any peculiar effect; but if an Hunterian chancre be chosen, which is extending itself daily, and has not yet begun to furnish granulations, whether that chancre has existed only a few days or several months, or even years, (for I have seen a chancre which has existed eighteen months furnish the inoculable pus,) and if it be introduced, by means of a lancet, underneath the epithelium or epidermis of any part of the body, (the inner part of the thigh is usually preferred, from convenience,) the following results will constantly and inevitably be obtained:

"During twenty-four hours succeeding the operation the inoculated point becomes red; in the course of the second and third days the surrounding parts are slightly swollen, and assume a papular appearance, or already traces of a vesicle are seen in the summit; on the third or fourth day a fluid, which is more or less transparent, is observed beneath the epidermis, and a distinct vesicle becomes apparent where the papula previously existed, and a dark dot is seen in the centre, owing to the coagulation of the blood which had escaped through the puncture of the lancet; from the fourth to the fifth day the vesicle assumes a pustular character, and a distinct depression is seen in the centre, so that it represents very distinctly at this period the small-pock pustule. The red areola, which had been hitherto gradually augmenting in intensity, now as gradually fades away, and the cellular tissue, which was slightly oedematous, becomes infiltrated with a plastic lymph. On the sixth or seventh day the pustule is observed to be wrinkled, in consequence of the contents becoming thicker, and ultimately a crust takes the place of the pustule. If not interfered with, this crust assumes a conical appearance, increasing always at the base; it ultimately falls off, leaving an ulcer seated on an indurated base, in depth equal to the thickness of the skin; the bottom of the ulcer is covered with a whitish pulpy substance, or false membrane, which adheres so firmly that it is with difficulty wiped or washed off. The ulcer is perfectly circular, and appears as if made with a punch, so accurately is the margin defined. When examined by means of a microscope, the border is slightly indurated, and surrounded with a red areola, giving to the sore a somewhat compressed appearance. The secretion from this ulcer consists of a thin pus, tinged usually with blood, but differing in no perceptible character from the ordinary pus. Examined by chemical tests, it is found to be alkaline; under the microscope, animalcules may be seen

in it, particularly the vibriolincola of Müller. These seem only a coincidence, and are not peculiar to the secretion of chancre, as some authors have supposed."

There must be an abrasion of the skin to insure the success of the inoculation, the pus exercising no influence on the sound integument; but neither heat nor vitality in the pus is necessary, matter kept seven days in bottles by M. Ricord having perfectly succeeded.

"It now remains (Mr. Acton says) for me to state in what cases inoculation (employed as we have above stated) should be used, and what advantages we may expect to derive from it. In all cases of obstinate and violent gonorrhœa inoculation should be practised, as we shall be enabled to say, if a chancre exists in the canal. We can thus apprise our patient that he is liable to secondary symptoms, and we at once must follow a different line of local treatment, as we have rather to treat a chancre than a gonorrhœa!

"Inoculation should be employed in cases of obstinate and suspicious sores, seated on any part of the body or mucous membranes."

Mr. Acton considers that the sore produced by inoculation should be healed at once, if it has afforded the satisfactory evidence; from this being improperly neglected, he has seen the sore attain a size to frighten both surgeon and patient, and thus tend to bring the method into disrepute. In well marked chancres he considers it superfluous, and that in phagedenic sores we should not inoculate; the inoculated sore frequently proving as intractable as the original one.

Such is a short summary of his opinions on inoculation: our readers will be well repaid by referring to the papers themselves.

We must briefly object to Mr. Acton's "confident denial" that secondary ulcers are not inoculable. That they are contagious, very few well-educated practitioners in this country doubt. Cases of nurses, contaminated by children having secondary syphilitic ulcers on the mouth, and producing ulcers on the nipples, &c., are, lamentably, by no means scarce. In Mr. Colles's admirable work there is adduced very satisfactory evidence on this subject. In considering any theory or mode of treatment proposed by French surgeons, or founded on syphilis observed in France, one thing should ever be kept in view, that the disease in Paris is, in many particulars, very different from the disease in Dublin. A careful observation of the numerous cases in the Hôpital du Midi convinced us of this: it is a great deal milder. We saw no case of rupia, no iritis, no bad nodes; and M. Ricord informed us that they are very rare; the proper-

tion of secondary symptoms in the hospital, to cases of primary sores and buboes, was small. In a single morning among the externs we saw a primary sore that is of extreme rarity here—namely, a small red, raised, spongy-looking ulcer, two or three lines within the orifice of the urethra. This difference of the disease in the two countries, we repeat, should never be lost sight of, and should make us cautious in rejecting remedies, long sanctioned by experience at home, for others which, however successful abroad, may be quite inadequate to combat the more formidable disease we have to treat.

J. H.

Inaugural Dissertation on the Physiological Inferences to be deduced from the Structure of the Nervous System, in the invertebrated Classes of Animals. By WM. B. CARPENTER, M. D.

DR. CARPENTER'S larger work has already procured for him an extended and enviable reputation, as a scientific physiologist; nor will this unpretending little brochure at all detract from it. Its object is to bring the information afforded by comparative anatomy to bear upon the physiology of the nervous system, and especially "to ascertain how far Dr. Marshall Hall's doctrine regarding the distinctness of the *excito-motor*, from the *sensori-volitional* system of nerves, accords with the data furnished by comparative anatomy."—(*Preface*.)

After a careful, though brief examination of the nervous apparatus in the different classes of animals, Dr. Carpenter draws the following conclusions:

"1. That a nervous system, in the form of connected filaments, with ganglia in certain parts of them, exists in all animals, (that is, in all beings endowed with any degree of sensibility and voluntary power,) although its presence may not be detected by our means of observation.

"2. That the actions most universally performed by a nervous system are those connected with the introduction of food into the digestive cavity.

"3. That we have reason to regard this class of actions as every where independent of volition, and perhaps also of sensation; the propulsion of food along the œsophagus in man being of this character.

"4. That, for the performance of any action of this nature, a nervous circle is requisite, consisting of an *afferent* nerve on the peripheral extremities of which an impression is made; a ganglionic centre, where the white fibres of which that nerve consists terminate in grey matter, and those of the *efferent* nerve originate in like man-

ner; and an *efferent* nerve, conducting to the contractile structure of the motor impulse, which originates in some change in the relation between the grey and white matter.

"5. That such actions may be regarded as the simplest of those which the nervous system performs, and most resemble the examples of contraction produced by the irritation of distant organs in plants; (where an *impression* is mechanically conveyed by the circulating system,) of any which the animal kingdom affords.

"6. That in the lowest animals such actions constitute nearly the entire fruition of the nervous system; the amount of those involving sensation and volition being very small.

"7. That, as we ascend the scale, the evidence of the participation of true sensation in the actions necessary for the acquirement of food, as shown by the development of special sensory organs, is much greater; but that the movements *immediately* concerned with the introduction of food into the stomach remain under the control of a separate system of nerves and ganglia, to the action of which the influence of the cephalic ganglia,—the *special*, if not the *only* seat of sensibility and volition,—is not essential.

"8. That, in like manner, the active movements of respiration are controlled by a separate system of nerves and ganglia, and are not dependent upon that of sensation and volition, though capable of being influenced by it.

"9. That the centres of these systems are brought into closer structural relation with that of the *sensory-volitional* system, as we ascend the scale of invertebrated animals: until they at last apparently become a part of it, as in vertebrata, where, however, they still remain really separate, and may be artificially insulated.

"10. That, whilst the actions are in the lower tribes almost entirely of a simply reflex character, we find them, as we ascend, gradually becoming subordinated to the will; and that this is effected by the mixture of fibres proceeding directly from the cephalic ganglia with those arising from their own centres.

"11. That the locomotive organs, in like manner, have their own centres of reflex action, which are independent of the influence of volition, perhaps also of sensation.

"12. That the influence of the will is conveyed to them by separate nervous fibres, proceeding from the cephalic ganglia, and that similar fibres probably convey to the cephalic ganglia the impressions destined to produce sensations.

"13. That the stomato-gastric, respiratory, and locomotive centres are all united in the spinal cord of vertebrata, where they form one continuous ganglionic mass, and that the nerves connected with all these also receive fibres derived immediately from the cephalic ganglia.

"14. That whenever peculiar consentaneousness of action is required between different organs, their ganglionic centres are united more or less closely, and that the trunks themselves are generally connected by bands of communication.

" 15. That the sympathetic system does not exist in the lowest classes in a distinct form ; that the nervous system of the invertebrata, taken as a whole, bears no analogy with it ; that, as the divisions of this become more specialized, some appearance of a separate sympathetic presents itself, but that this is never so distinct as in vertebrata.

" 16. Hence it may be inferred that, as the sympathetic system is not developed, in proportion to the predominant activity of the functions of organic life, but in proportion to the development of the higher division of the nervous system, its office is not to preside over the former, but to bring them into relation with the latter ; so that the actions of the organs of vegetative life are not dependent upon it, but influenced by it, in accordance with the operations of the system of animal life."—pp. 76 to 79.

We strongly recommend this little work to all students of comparative anatomy. It is written in the true spirit of philosophic investigation, and displays great research.

SCIENTIFIC INTELLIGENCE.

PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF DUBLIN.

SESSION 1839—1840.

First Meeting, November 30, 1839.

MR. CARMICHAEL in the Chair:

1. *Emphysema of the Submucous Tissue of the Stomach.*—

Dr. Hutton laid before the meeting a stomach, in the submucous tissue of which air had been secreted in large quantity, elevating the mucous membrane, and forming a congeries of transparent vesicles, situated towards the greater extremity of the stomach; the lining membrane of the organ was slightly inflamed, but nowhere softened; the œsophagus superficially ulcerated, and the duodenum preternaturally vascular; the liver was hypertrophied and the kidneys in a state of congestion. The cavities of the heart were empty, and the lining membranes of the great arterial trunks were tinged of a deep scarlet colour; the left cavity of the pleura and the lungs contained dark coloured fluid blood; the brain presented nothing abnormal, with the exception of slight effusion into the ventricles. The specimen was taken from the body of a man, æt. 36, who was admitted into the Richmond Hospital, labouring under the usual symptoms of delirium tremens, but not to an alarming amount. On the evening, however, of the day after his admission he was attacked with violent delirium, followed by rigors, cold perspirations, and convulsions, and died at twelve o'clock at night. Dr. Hutton alluded to the cases of pneumatosis of the intestinal mucous membrane, recorded by various authors, and concluded by drawing the attention of the Society to the connexion that appeared to exist in such cases between the fluid state of the blood and the occurrence of emphysema in various tissues of the body. (*Museum, Richmond Hospital.*)

2. *Medullary Sarcoma of the Lung. Medullary Tumour in the Pelvis.*—Professor Harrison exhibited the recent parts in this case; the lungs contained a great number of small tubercles and masses, which presented the characters and structure of medullary sarcoma; the intervening pulmonary tissue was healthy, a large medullary tumour existed in the pelvis; it was firmly attached to

the ilium, had penetrated the substance of the psoas muscle, and pressed against the spinal column and nerves of the lumbar plexus; the apex of the tumour had passed into the spinal canal, through the foramina which transmit the nerves, and compressed the sheath of the cord. The subject of the case was a young woman æt. 20, of a robust and healthy appearance, who, about four months previous to her admission into Jervis-street Hospital, had received an injury of the side, by falling upon the edge of a basket. Some tumefaction succeeded, and, after the lapse of three weeks, severe pain in the situation of the heart, and weakness of the lower extremities, incapacitated her from any exertion. She soon completely lost the power of motion of the lower limbs, sensation, however, remaining perfect; gangrenous sores formed on one of her feet, and over the sacrum and hips; and she had paralysis of the rectum and bladder. About a week before her death she complained of dyspnoea, but the stethoscope did not indicate the existence of any organic lesion: a small tumour could be felt above the os ilii, firmly attached to the bone. She died rather suddenly on the night of the 28th November. (*Museum, Trinity College.*)

3. *Acute Gastritis supervening on the Subsidence of Pneumonia.*—Dr. Stokes exhibited the stomach and lungs of a patient who had died lately in the Meath Hospital, and which illustrated the sympathy which is occasionally seen to exist between the left lung and stomach in disease—a sympathy which is observed in its most perfect state in cases of fever or delirium tremens, in which the irritation or inflammation of the gastric mucous membrane is complicated with pneumonia of the left lung. Dr. Stokes said he had met with some cases of this description in which the inflammation of the lung had suddenly subsided, and had been replaced by gastritis of a severe character; in fact, partaking of the obstinate and intractable nature of diseases which occur under circumstances of metastasis. The parts exhibited were taken from the body of a patient who was admitted labouring under fever, but without any sign of gastric complication; the posterior portion of the left lung was in a state of hepatization. This was supposed to be the result of unresolved pneumonia, with which the patient had been affected previous to admission. He was treated with local bleeding and blisters. To the great surprise of those who witnessed the case, the lung, which had exhibited such unequivocal symptoms of disease, became quite clear on percussion; the respiratory murmur returned over the whole of the affected part; and the disease was resolved with great rapidity. But in a very short time afterwards the patient showed signs of gastric irritation, and began to vomit. The vomiting continued without ceasing for thirteen days, and, in spite of every remedy that could be employed, the patient sank with evident symptoms of gastric inflammation: On dissection, the right lung was found to be the seat of a very chronic process of disease. In its upper lobe there was the remains of an old tubercular cavity. It presented the cicatrix of

a tubercular abscess, the appearances corresponding exactly with the description given by Laennec. The costal pleura was greatly thickened, from deposition of organized lymph. The pulmonary pleura presented also a coating of lymph, and the false membrane was studded with minute depositions of tubercular matter. The disease observed in the pleura was considered by Dr. Stokes to be coeval with the formation of the tubercular abscess. The left lung was every where crepitating; its posterior portion slightly vascular and oedematous; and there were a few tubercles in the inferior lobe. The stomach afforded a very good specimen of gastric inflammation. The mucous membrane was of a deep red colour, highly vascular and thickened, but not much softened. Dr. Stokes observed that there was nothing very interesting in the preparation, as an anatomical specimen, but it was interesting as serving to illustrate a point in practical medicine, which had not been sufficiently attended to—viz., that, in cases of the kind already described, pneumonia may be rapidly resolved, and replaced by gastritis of a very unmanageable character. He had observed this metastasis in several cases, and remarked that the rapid subsidence of pneumonia, followed by hiccup and vomiting, is always an unfavourable symptom.

4. *Acute Cystitis*.—Mr. Adams exhibited a recent specimen of acute cystitis. The mucous membrane of the bladder was remarkably villous, and deeply injected with blood, so as to exhibit in some parts a scarlet, in others a crimson hue; in some places the membrane was destroyed by ulceration, and the muscular fibres were exposed; at one or two points the bladder was in a state of slough, which extended to the peritoneal covering, giving rise to peritonitis; the mucous membrane and muscular coat were hypertrophied: a stricture existed in the urethra. The patient was an elderly man, who, twenty years previous to his death, had been under treatment for stricture, and had been relieved; but the bladder remained irritable, and the symptoms of chronic cystitis were established. About one month previous to his death, acute inflammation of the bladder supervened, for which he was admitted into the Richmond Hospital. He had, at the time of his admission, fever, thirst, restlessness, and extreme tenderness over the pubic region; the attack commenced with rigors, followed by low fever, and a urinous odour was exhaled from the skin. Mr. Adams remarked that the case afforded a good illustration of the supervention of acute on chronic disease of the bladder—by no means an uncommon cause of death in elderly subjects, who have long laboured under chronic inflammation of the bladder. (*Museum, Richmond Hospital.*)

5. *Hernia Cerebelli; Hydrocele of the Arachnoid Membrane*.—Mr. Ferrall exhibited the preparation and drawings of this case. The child, — years old, was admitted into St. Vincent's Hospital on account of a tumour, rather larger than his head, which sprang by a pedicle from a congenital opening in the occipital bone.

The tumour was solid, or woolly to the touch, (but without pul-

sation,) for about an inch beyond the bone ; the remainder contained fluid, and was nearly translucent. Its communication with the arachnoid was evidenced by the phenomena of pressure on the brain, when the tumour was compressed. The intellectual faculties were as much developed as in children of that age.

Mr. Ferrall punctured the tumour several times with a grooved needle, and let off three or four ounces of fluid at a time, but the tumour refilled in a few days. Conceiving that the first step towards the removal of the disease would be to cut off the communication with the arachnoid, he tried the effects of circular pressure on the neck of the tumour, below the solid portion. This failed, on account of strangulation and swelling of the integuments below. It then occurred to him to bring the serous surfaces into contact, without making pressure on the skin. With this view he passed a fine needle through the neck of the sac, and after a few days another, and so on until the diameter of the neck of the sac was completely traversed. Pressure now no longer produced the apoplectic symptoms, and he concluded that the cyst no longer communicated with the arachnoid membrane ; that it was now, in fact, reduced to a case of hydrocele of the arachnoid.

Domestic calamities obliged the mother to withdraw the child at this period. It was badly lodged and nourished ; and when seen again, in a few months, was wasting rapidly away. After death, the lungs were found extensively tuberculated ; a portion of the occipital bone, with the tumour, was removed ; the large sac exhibited a distinct cicatrix at its upper part, and had now no communication with the cerebral cavity ; the small solid portion of the neck was found partly to consist of a nodule of the cerebellum, not larger than a hazel nut, part of which had degenerated into cellular tissue ; the remainder of this solid portion was a small cyst, containing about one drachm of serum.

In a similar case to the present, after insulating the cyst by the means adopted in the present instance, Mr. Ferrall would amputate the tumour below this point, not by the knife, but by a gradually deepening cicatrix, produced by a succession of applications of caustic, in a narrow circle round its neck. The advantages of this mode over the use of the ligature or knife are obvious.

Mr. Ferrall concluded by observing, that the small bulk of cerebral substance prolapsed ; and its having already undergone, in part, a change, would render such a case most favourable for the subsequent employment of mechanical support, in order to aid nature in obliterating the aperture in the bone. (*Mussum, St. Vincent's Hospital.*)

6. *Transverse Fracture of the Base of the Skull.*—Mr. Smith laid before the meeting the recent parts in this case. Upon the left side the fracture traversed the anterior surface of the petrous portion of the temporal bone, running obliquely forwards and inwards, from the external meatus to the inner end of the petrous process. The membrana tympani was ruptured ; the line of fracture passed through the

superior and inferior walls of the tympanum, and through the bony portion of the Eustachian tube; the bones of the ear were exposed, and the corda tympani was seen crossing the handle of the malleus; a second fracture traversed the petrous process from before backwards, exposing the vestibule and base of the cochlea: this fracture was comminuted, the prominent portion of bone which indicates the situation of the superior semicircular canal having been separated, and the greater part of the course of the canal thus exposed; between this detached portion and the dura mater there was a small coagulum; the dura mater was not torn. The right temporal bone was also broken; the line of fracture was the same as upon the left side, the membrana tympani being broken, and the bones of the ear exposed; the malleus and incus were separated from the stapes, which still closed the fenestra ovalis; the proper internal ear escaped injury upon this side; a fracture likewise traversed the basilar process of the occipital bone, thus connecting the lesions of the temporal bones, and completing a line of fracture, which extended from the centre of the squamous suture of one side to the corresponding points of the opposite, through the middle fossa of the base of the skull; the internal surface of the dura mater was lined with a layer of reddish-coloured lymph, of an exceedingly delicate texture; the brain was covered with lymph of a greenish colour; and the under surface of the right middle lobe, where it rests upon the petrous process, was lacerated: coagulated blood adhered to the dura mater in many places. The patient, from whom the specimen was procured, was aged 48; he was admitted into the Richmond Hospital on the 28th of September, 1839. Upon the evening of the 26th he fell backwards down a flight of stairs, and his head struck against the flags of the hall; he remained insensible for two hours, blood flowing from both ears. During the next day he remained in a stupid state, and towards evening had a convulsion resembling epilepsy; upon the following day he was brought to the hospital. Upon the 29th a discharge of serum took place from the left ear, and the left side of the face was observed to be paralyzed; he had tinnitus aurium and severe pain in the left side of the head. He remained in a stupid, listless state for a fortnight, without involuntary discharges, convulsion, or paralysis, except of the left side of the face. October 14th, he was seized with a rigor, which continued for half an hour, and upon the following day he lapsed into a state of complete stupor, and died upon the morning of the 16th. Mr. Smith drew the attention of the Society particularly to the serous discharge which took place from the left ear, the occurrence of which, in injuries of the head, he considered indicative of a fracture, through the petrous portion of the temporal bone and cavities of the ear: it did not take place upon the right side, where the internal ear was uninjured. He remarked that this symptom, though mentioned by Dease and Colles, did not appear to have attracted the notice of the English writers upon injuries of the head. Having alluded to the occurrence of a discharge of serum from the ear in various diseases,

Mr. Smith expressed his opinion, that in fracture traversing the petrous processes, the fluid, when small in quantity, was derived from the cavities of the internal ear; but when profuse, was poured forth not only from these cavities, but most probably from the arachnoid sac also, the dura mater being lacerated in the latter case. (*Museum, Richmond Hospital.*)

Second Meeting, December 7.

Mr. ADAMS in the Chair.

1. *Uterine Hydatids.*—Dr. Montgomery exhibited a specimen of uterine hydatids, which were removed from the uterus of a lady, aged 45. Dr. Montgomery saw her, in consultation, November 7: she had then hæmoptysis, with enlargement of the abdomen, and a considerable degree of uterine hæmorrhage; she had menstruated regularly up to March last, when the catamenia ceased. In May she was attacked with hæmoptysis, and early in August became conscious of the presence of a tumour in the abdomen, near the right inguinal region. From this period she became subject to serous and sanguineous discharges from the vagina, generally copious and of frequent occurrences; the abdominal tumour increased gradually in size, and she had occasional attacks of hæmoptysis. When Dr. Montgomery first saw her, the abdomen was as large as that of a woman in the seventh month of pregnancy; the tumour had ascended above the umbilicus, and had the form of the gravid uterus, but felt rather firmer to the touch; it was of uniform consistence, and had a doughy feel; the cervix uteri was obliterated, and the os uteri so open as to admit the introduction of a finger. Dr. Montgomery was of opinion that the abdominal tumour was a distended uterus; that the case had originated in conception; and that the substance which was contained in the uterus was probably a blighted ovum, and perhaps a hydatid mole. With regard to the hæmoptysis, he looked upon it as symptomatic; and the patient stated that in every one of her five last pregnancies she had spitting of blood, which generally lasted for two or three months. No trace of a foetal heart could be detected; and although the placental murmur was audible, it could be heard only over one spot of the uterus, and was of that description mentioned by Dr. Every Kennedy, as being heard immediately after the separation of the child from the mother by the division of the cord, or immediately after the death of the foetus in utero: it was a short and rather imperfect murmur, but quite distinct. The abdominal tumour was attended with peculiar sensations; the patient stated that she frequently felt a kind of creeping or sliding motion in the uterus. On the 15th of November she had profuse hæmorrhage from the uterus, with distinct labour pains. Dr. Montgomery now introduced his hand into the uterus, and extracted from its cavity upwards of a gallon of hydatids, covered with the decidua. With regard to the diagnosis of the presence of uterine hydatids, Dr. Montgomery remarked that the case generally commenced as one of ordinary pregnancy: the

tumour is rapid in its growth, and simulates that of a gravid uterus; but there is an absence of what has been termed quickening, in place of which there is a creeping or sliding motion, caused, most probably, by partial and successive contractions of the uterine fibres on the contained mass of hydatids; in the quiescent state, moreover, the uterus has a peculiar doughy feel, and, after the fifth month, a remarkable degree of obliteration of the cervix uteri takes place—an occurrence which is rare in ordinary pregnancy. The patient ultimately sunk, exhausted by diarrhoea. (*Museum, Sir Patrick Dun's Hospital.*)

2. *Enlargement of the Gall Bladder, with Distention of the Pancreatic and Biliary Ducts. Scirrhus Tubercles in the Pancreas and Liver.*—Mr. Smith exhibited the recent parts in this case. The liver was of a dark green colour, and contained a number of white hard tubercles; tumours of a similar character existed in the pancreas, towards its right extremity, and the substance of the gland was remarkably indurated; the termination of the pancreatic and common biliary ducts was compressed, almost to obliteration; the pancreatic duct, throughout the substance of the gland, was dilated, so as to admit of the introduction of the forefinger; the ductus communis choledochus and hepatic ducts in the substance of the liver, were also greatly enlarged; the latter formed cavities, capable in some places of admitting of the passage of two fingers; the gall bladder, distended to a very great degree, passed down below the umbilicus towards the right iliac fossa; a tumour of scirrhus hardness, and about the size of a pullet's egg, lay behind the pancreas, but not connected with the glandular structure; the hepatic artery passed through its centre, its calibre undiminished; the skin and internal organs were deeply jaundiced. The patient was a female, aged 86; last July she complained, for the first time, of symptoms of hepatic disease, and a tumour appeared at the right side of the abdomen, a little above the umbilicus; it was soft, compressible, could be made to alter its position, and received a slight impulse from coughing; it was mistaken for ventral hernia. The patient was admitted into the Whitworth hospital, in August, with an enlarged and tuberculated liver; the tubercles could be felt through the parietes of the abdomen. The tumour above alluded to was recognized as a distended gall-bladder: the woman died towards the close of November. (*Museum, Richmond Hospital.*)

3. *Scrofulous Disease of the Ankle Joint.*—Mr. Adams laid before the Society an example of this disease, removed a few days previous, from the body of a lunatic, aged twelve, who had suffered for a long time from scrofulous abscess of the cervical glands; the affection of the ankle was of six months' duration. The joint presented the usual globular form, and elastic feel of white swelling; the bones which compose the articulation, as well as those of the tarsus, exhibited a high degree of vascularity, and were soft and pulpy; the cartilages for the most part preserved their integrity,

while the osseous tissue which they invested was in some places completely absorbed; the nerves in the vicinity of the joint were greatly enlarged, particularly the posterior tibial. The patient was amaurotic and dumb, although not deaf; he had scrofulous abscesses in the neck, and obstinate diarrhoea. He died exhausted, partly from hectic fever, induced by the disease of the ankle-joint, and partly from diarrhoea. Mr. Adams brought forward this specimen in confirmation of what he has elsewhere stated, that the nerves in scrofulous disease of the ankle-joint are generally hypertrophied.—See Todd's *Cyclopædia*, Article, "Ankle Joint." (*Museum, Richmond Hospital*.)

4. *Small-pox Pustule in the Bladder*.—Dr. Greene presented a remarkable specimen of small-pox on the mucous membrane of the bladder. The patient, a young man, died of small-pox. While convalescent from fever, he caught infection from another person in the same room, and had the disease in the confluent form. He died on the fifth day after the appearance of the eruption, and shortly before his death was attacked with severe diarrhoea. There were no pustules in the respiratory passages or intestinal tube.

5. *Hydrocele of the Neck*.—Dr. Hutton exhibited a recent specimen of hydrocele of the neck, taken from the body of a man aged 60, who had been admitted a short time before his death into the Richmond Hospital, with inflammation of a diffuse character, affecting the cellular tissue in the vicinity of the left parotid and submaxillary glands. The inflammation rapidly passed on to suppuration, and the crepitation of air was felt in the cellular tissue, which was found to be in a state of slough. The sloughing process went on rapidly, attacking the glands and cellular tissue under the deep fascia of the neck. The hydrocele (which had existed for twenty years, was as large as an orange, and corresponded in situation to the left lobe of the thyroid body) did not appear to participate in the inflammation of the cellular tissue. The patient sunk rapidly with fever of a typhoid character, his breath was foetid, and he expectorated a most offensive and unhealthy matter. Shortly before death he complained of pain along the back of the sternum, and several spots of gangrene appeared on the lower part of the neck; he had dysphagia and dyspnoea.

Upon examination after death, the cellular tissue throughout the whole of the left side of the neck was found in a state of slough, and infiltrated with foetid purulent matter; this large gangrenous abscess communicated with the pharynx, close to the epiglottis. The mucous membrane of the trachea was of a deep red colour; the lungs contained gangrenous abscesses, and the cellular tissue at the root of the lungs was in a state of slough. The sac of the hydrocele did not appear to have participated in the diffuse inflammation which had attacked the left side of the neck; it was very thick, and closely resembled the sac of a hydrocele of the tunica vaginalis; it was filled with a dark-coloured serum. (*Museum, Richmond Hospital*.)

Third Meeting, December 14, 1839.

Professor GRAVES in the Chair.

1. *Pneumo-thorax, with Fistula, in Phthisis, and in Gangrenous Abscess of the Lung.*—Dr. Law exhibited specimens illustrative of these varieties of the disease. In the phthisical case the illness was of two years' standing, and the occurrence of the perforation was not marked by any sudden aggravation of symptoms. On admission into Sir Patrick Dun's Hospital, the usual signs of empyema, pneumo-thorax, and fistula existed on the right side; and in addition to these the gurgling of a cavity, with "*souffle voilé*," could be heard under the clavicle. There was no remarkable dilatation of the side, and change of position did not alter the situation of dulness on percussion. The fluid increased considerably, and he died on the fifty-seventh day after admission. The whole pleura was coated with coagulable lymph, and the sac contained a large quantity of sero-purulent fluid, and air in its superior portion.

Dr. Law begged to direct the attention of the Society to the fact, that the fistulous opening was large, and not at all valvular, a circumstance, which, taken in connexion with the history of the case, tended to confirm a statement made during the last session of the Pathological Society, that the rapidity of death, and amount of suffering, from dyspnoea, are greatest in cases where the opening is valvular.*

In the second case, a gangrenous abscess of the left lung seemed to have opened into the pleura. The patient, an emaciated and exhausted person, was admitted with symptoms of pleuro-pneumony. On the night of his admission he was attacked with a sudden increase of suffering, and expectorated a quantity of frothy, greenish, purulent matter. He died in two days. Before opening the body, Dr. Law found that the anterior part of the left lung, which had been dull, had become clear. A large gangrenous cavity existed in the lower lobe of this lung, opening into the pleura. In its most superior portion it was congested, and this gradually passed into a hepatized state; a little lower there was purulent infiltration, and this was succeeded by the gangrene. The right lung was in the state termed *splenization*.

2. *Fatty Degeneration of the Heart.*—Mr. Carmichael presented several specimens of this disease, taken from the Museums of the Richmond Hospital and Richmond School, in order to illustrate a case of the disease which had recently occurred to him. The patient, an elderly clergyman, had never been confined to his bed or his room by the disease of which he died, and had continued to discharge his professional duties almost up to the last moment. Immediately after performing a marriage ceremony, and while seated with the parties at breakfast, his head was observed to droop on his chest, his breathing became loudly stertorous, and he fell from his chair in a state of in-

* See the former Reports of the Pathological Society, in this Journal.

sensibility: the veins of the neck were turgid. Dr. Hutton, who was present, opened the jugular vein, and did all that skill or attention could devise, to resuscitate him, but in vain. On inquiring from his family if he had complained of ill health at any time, Mr. Carmichael learned that for many years he had been subject to palpitation of the heart, and that on one or two occasions he had fainted without any known cause. On the day after his death, the veins of the forehead and temple were found to be turgid, and yielded a sense of crepitation to the touch. Upon examining the body, (five days after death,) it was noticed that the subcutaneous cellular tissue of the neck, upper extremities, and trunk, was emphysematous, and the scrotum, distended with air, had attained the size of a melon, and was nearly transparent; beneath the integuments of the abdomen there was a layer of adipose substance, upwards of an inch in thickness; the anterior mediastinum was loaded with fat; when the pericardium was laid open, the heart was seen covered with fat, and its right cavities distended with air to a great amount; the walls of the right ventricle were about two lines in thickness, and fat appeared to occupy the place of the muscular fibre; what remained of the latter was remarkably soft and greasy, it could be torn with the utmost ease. The left side of the organ presented similar appearances, though in a much slighter degree; the stomach was distended with air to a great size; the liver, lungs, and brain were healthy; there was merely a very slight degree of subarachnoid effusion. Mr. Carmichael expressed his opinion, that in these cases the cause of death was to be sought for in the inability of the right ventricle to propel the blood through the lungs, in consequence of which, that fluid accumulated in the right auricle, descending cava and veins of the head, and that the line of treatment, in such cases, should be directed to the unloading of the vessels of the brain by a small bleeding, while at the same time we should endeavour to increase the heart's action by the judicious employment of stimulants. Mr. Carmichael concluded by referring to the writings of Laennec, Andral, and Adams, upon the subject of fatty degeneration of the heart; he likewise alluded to the essay published by Mr. Smith, in the Dublin Medical Journal, vol. ix., upon that affection, combined with the presence of oil in the blood.

3. *Acute Arthritis Genu supervening on chronic Disease of the Joint.*—Mr. Adams presented to the Society a recent specimen and drawing of the knee-joint of a man, aged 70,—William Walsh, who died the day previously, in the House of Industry, of an attack of acute arthritis-genu, which fatal attack had supervened on a chronic disease of the joint, of long standing. The synovial sac of the joint had been much distended, was more capacious than usual, and was greatly thickened; it presented on its internal surface an intense scarlet colour, and extensive deposits of a yellowish-green coloured lymph were noticed over the entire of the synovial sac; the strong contrast in colour between the green lymph, and the red, villous, synovial membrane, was seen in the preparation, and admirably imitated in the drawing; the

crucial ligaments were partially removed, and on dissection it was found that the external and internal lateral ligaments had lost all their distinctness as fibrous bands; both seemed to be resolved and spread out into thin membranes or fasciæ, which but little restrained the movements of the knee, and allowed of a movement of rotation to be communicated to the joint; the articular and semilunar cartilages were removed, and the denuded porous surface of the tibia, femur, and patella presented numerous small red spots, as if they had been sprinkled with red sand; an abscess containing about two ounces of yellowish-green pus was found under the cruræus muscle, just above the synovial sac of the joint, with, which, however, it had no communication. The fluid in the interior of the joint, which was a thin series, had made its way externally, by a large sloughy-looking opening, in front of the leg, about two inches below the knee. (*Museum, Richmond Hospital.*)

4. *Acute Inflammation of the Knee-Joint.*—Mr. Adams also exhibited a drawing showing the early effects of acute inflammation of the knee-joint, (the preparation from which the drawing was taken is in the Richmond Hospital Museum.) The patient who was the subject of the disease, was aged 58; he was admitted into the Richmond Hospital labouring under erysipelas of the head. During the course of the disease, the knee-joint became hot and swollen, and fluctuation was evident on each side of the patella; on the eighth day after the affection of the joint set in, the patient died of the erysipelas of the head. The joint was carefully dissected, some fine red injection having been previously thrown into the femoral artery. The synovial sac of the articulation was distended with a turbid yellowish-green fluid; when this was washed away the synovial membrane was found of a bright pink colour, and put those who were examining it much in mind of the appearance which the conjunctiva presents in sub-acute conjunctivitis; it was somewhat thickened and pulpy, and had advanced somewhat over the external condyle of the femur; the sub-synovial structure was infiltrated more or less; the cartilages had lost their normal whiteness, they were of a murky, yellowish hue, somewhat softened, and the cartilaginous covering of the patella was slightly elevated in patches, and one spot of ulceration was seen at its external edge; it was in some places so soft that the blunt probe easily penetrated into its structure. Mr. Adams remarked, that many would call this case one of simple synovitis genu, but it was manifest that although the acute disease in question began in the synovial membrane, that very soon the other structures of the articulation became implicated, and at the period of the patient's death, (which was only a few days after the first attack of the joint,) the term synovitis genu was not a name sufficiently comprehensive for the disease. (*Museum, Richmond Hospital.*)

5. *Healthy Condition of the Heart in Typhus Fever.*—Dr. Stokes laid on the table the heart of a young female, who had recently died of typhus fever. In referring to his investigations on this subject, he observed that with respect to the condition of the heart in

typhus, the cases might be divided into these without, and these with, softening of the organ. In the case he now presented there was no softening; it was a good example of a perfectly healthy heart. The patient died on the thirteenth day of the disease.

In contrasting the symptoms in this case with those in others in which the typhoid softening occurred, Dr. Stokes observed, that in the latter class there was diminution of impulse. In this case there was violent jerking action of the heart, from the ninth to the twelfth day of the disease. In the softening of the heart wine is generally found to agree; in this case it disagreed: the pulse became *more rapid* and *less strong* under its influence. In the softening, the heart's action becomes stronger and slower, the pulse fuller, stronger, and slower under wine; but in this case the pulse became rapid and weak, though the heart's action was violent. In the softening the sounds of the heart are diminished, or even lost; in this case they continued loud and distinct up to the day of death.

6. *Abortion of five Fœtuses in the third Month.*—Dr. B. Kennedy presented a specimen taken from a female who had borne five children at once, and had aborted in the third month of pregnancy. The specimen consisted of three distinct ova, with their appendages. Two of these were double, and contained twins, the third was single; each of the double ova were enveloped in a common membrane, and had a common placenta; the single ovum had its own placenta and membranes. Some persons were disposed to question the occurrence of these multiparian births, but there had been two or three well-authenticated instances of five children at a birth. One of these occurred lately at Naples, the other about twelve years ago in North America. It was a curious fact, that in the matter of multiparian births, Ireland preponderated. The proportion of twin cases in this country is one in sixty; in London it is one in ninety-one; in France, one in a hundred and forty; in America, (where there is a large proportion of Irish settlers,) it is one in seventy-five. It was also a curious fact, that the female who gave birth to five children at once, in America, was an Irish emigrant. The female from whom the specimen was taken aborted with bearing-down pains about the third month of her pregnancy, most probably from over distention of the uterus. She had laboured under constant nausea, a symptom which appears to be one of the most ordinary signs of multiparian pregnancy. (*Museum, Lying-in Hospital.*)

7. *Rupture of the right Ventricle of the Heart.*—Mr. Smith exhibited the heart of a man, who for two years previous to his death had suffered from repeated attacks of rheumatism. He never complained of any affection of the heart until the night of the 11th November, when he was suddenly seized with symptoms of collapse, and anxiety about the præcordia; his pulse fell to forty in the minute, his extremities became cold, his countenance pale, and his whole body was bedewed with cold perspiration. He remained in this state for eighteen or nineteen hours, and died upon the 12th. Upon examination after death,

the pericardium was found distended with blood, and a small lacerated opening was seen in the apex of the right ventricle, near the septum; the parietes of the ventricle became gradually thinner towards the seat of rupture; in other respects the heart was healthy. From a table, drawn up by Dr. Townsend, it appeared, that of twenty-five cases of rupture of the heart, in only three was the right ventricle the seat of the rupture; and of nineteen cases collected by Bayle, but three occupied the right ventricle. Mr. Smith remarked that the case he brought forward he considered interesting from its rarity, but that it derived an additional interest from the circumstance, that the symptoms would lead to the supposition that the rupture had taken place eighteen hours before death; life being prolonged under such circumstances could only, he conceived, be explained upon the supposition, that a coagulum had blocked up the opening in the right ventricle; he supposed that death at length took place when the coagulum was expelled, and concluded by alluding to the cases recorded by Cruvelhier and others, where a firm fibrinous concretion plugged up the fissure. (*Museum, Richmond Hospital.*)

Fourth Meeting, December 21.

Mr. CARMICHAEL in the Chair.

Morbus Coxæ; Partial Destruction of the Head of the Femur; Displacement of the Limb upwards, to a certain Extent.—Mr. Ferrall laid the parts, in this case, on the table of the Society. The patient was ten years of age, and died from repeated attacks of diarrhoea. He had been under Mr. Ferrall's observation in St. Vincent's Hospital for upwards of nine months. The shortening of the limb was about three inches; the thigh adducted and rotated inwards, and the leg and foot turned inwards. On dissection, the acetabulum was found carious, and at its lowest portion an aperture was found, which permitted a probe to pass into the pelvis. This opening, however, was closed by the false membrane, which lined the cavity of the acetabulum. The upper portion of the capsular ligament was perfect, but inferiorly there was an opening, through which the abscess had made its way into the surrounding muscles and cellular tissue.

The lower and posterior half of the head of the femur had been destroyed, while the upper and anterior portion lay above the brim of the acetabulum, its further ascent being prevented by a firm semi-cartilaginous growth, which caught on the brim of the acetabulum, connected with the inferior surface of the neck of the femur. This growth enveloped the lower part of the neck; it had a warty surface, and was of a deep rose colour.

Mr. Ferrall observed, with reference to the general question as to the cause of shortening of the limb in morbus coxæ, that, in his opinion, the destruction of the capsular ligament, so as to permit the head to pass upwards, is comparatively rare. The most common cause is caries of the head of the femur, and deepening of the acetabulum;

and the case he now submitted was an example of a third, and very interesting, cause of the deformity. (*Museum, St. Vincent's Hospital.*)

2. *Hypertrophy of the Heart, with Contraction of the left Auriculo-Ventricular Opening.*—Dr. John Crampton exhibited the heart in this case. The contraction of the left auriculo-ventricular opening was extreme, and the exciting cause of the disease seemed to have been a violent fall, which happened three years ago. From that time the patient complained of paroxysms of dyspnoea. Bronchitis then supervened, and ultimately the lungs became emphysematous, and, for some time before death, the sound, on percussion over the heart, was clear, from the enlargement of the lung.

3. *Hypertrophy of the left Ventricle, with Dilatation of the left Auriculo-Ventricular Opening; frequent Apoplectic Seizures.*—Mr. Fleming presented a heart, in which the state of the mitral valve was exactly the opposite of that in Dr. Crampton's case.

The form of the heart was almost spherical, its vertical axis being diminished, while its transverse was greatly increased. This modification was almost wholly owing to disease of the left ventricle, the capacity of which was greatly increased, as was also that of the corresponding auricle.

In this case the symptoms were, violent action and impulse of the heart; the organ striking over a large surface, while *the pulse at the wrist was small and weak*. A loud *bruit de soufflet* accompanied the second sound. During many of the exacerbations of the cardiac symptoms the patient was suddenly attacked with apoplectic symptoms. The attack often came on during sleep; the respiration would suddenly become stertorous, and the face contorted, when the patient would awake hemiplegic.

It was found that the best treatment for these attacks was the use of active stimulants, and the application of a sinapism over the heart. The attacks, under this treatment, often subsided in a few hours.

Mr. Fleming believed that in this case there was reason to suppose that the apoplectic attacks arose from an anemic condition of the brain—a condition not yet recognized by authors in cases of apoplexy, connected with hypertrophy of the heart.

4. *Malignant Fungus of the Antrum; gangrenous Abscess of the Lung; Pleuritis.*—Mr. Adams laid on the table a recent specimen of this disease. The disease was of several months' standing, and commenced with symptoms of toothach, for which the patient had two teeth extracted. The face then swelled; the eye became compressed; and frequent epistaxis occurred. A portion of the tumour could now be discerned protruding into the nostril. He had next hæmorrhage from the mouth. Soon after this he began to sink, and died with symptoms of pleuritis and intestinal disease. The tumour was an example of the cephaloma of Dr. Carswell—partly fibrous, partly medullary, and, in one situation, very vascular, and exuding blood from its surface (*fungus hæmatodes*.) It was not in

the spongy state so often met with in the more advanced stages of the disease. The bones on the corresponding side were all softened and moveable, particularly the palate processes of the superior maxillary and the palate bones, which were of a cartilaginous structure, highly elastic, the osseous material being as completely removed as if the bones had been steeped in acid; the form of the palate was altered, being slightly convex on the affected side.

The pleura presented marks of recent inflammation, and a small gangrenous abscess was discovered in the substance of one of the lungs, very similar to what Mr. Adams had so often witnessed in cases of diffuse inflammation, and glanders in the human subject. Some ulcerations existed in the intestines.

5. *Pneumonia in the Infant; Absence of Bronchitis or Pleuritis.*—Dr. Murphy exhibited the lungs in this case. The child was four months old, and had been attacked with very slight cough, general uneasiness, and loss of sleep. The respiration was accelerated, but there was no other symptom of pulmonary disease.

The lower lobes of both lungs were found solid and red; but the mucous and serous membranes appeared quite free from inflammation; the upper lobes were slightly emphysematous; the brain was soft, but not otherwise diseased.

6. *Dissecting Aneurism of the Aorta; Rupture into the Pericardium.*—Dr. Murphy also presented the preparation of the heart and aorta in this case. It was remarkable that no symptoms calculated to give rise to a suspicion of so serious a disease existing had been observed. The individual was in good health until the day before his death. He had been out riding, and complained in the evening of some pains and uneasiness of the chest, with difficulty of breathing. These symptoms soon subsided, but next day he was suddenly attacked with pain in the heart: he fell back, and expired. The pericardium was found full of blood, from the opening of an aneurism of the ascending aorta, which had separated the coats of the artery from each other, and at length burst into the pericardium. Dr. Murphy remarked upon the similarity which this case presented to those described by Mr. Smith, in the 9th vol. of this Journal.

Fifth Meeting, January 4.

Professor GRAVES in the Chair.

1. *Tubercular Depositions and Cavities in the Lungs, without Symptoms of Pulmonic Disease; Epilepsy.*—Professor Graves exhibited the recent parts in this case, the history connected with which was as follows:

A young lad, shortly after having eaten a great number of pears, and drank a considerable quantity of buttermilk, fell in a state of insensibility: he was visited by a physician of eminence, who thought it advisable to open the temporal artery. About seven hours after the

attack a hard tumour was felt in the epigastrium, which gave rise to the suspicion of the presence of undigested substance in the stomach. Purgatives were given with a favourable result, the tumour subsided, and the boy recovered his senses. The fit, however, returned, and after some time he became subject to regular attacks of epilepsy, which became of more frequent occurrence every successive year, but six years elapsed before his intellect was at all impaired: he then became first dull and stupid, then idiotic, with occasional glimpses of reason on subjects connected with religion. The fits were preceded by an aura, and followed by coma. Twice a year the disease was subject to most violent exacerbations, the fits recurring as often as ten times a day, and being followed by outrageous madness, which was generally a sign of the subsidence of the fits. When the mania subsided he relapsed into his ordinary state, and had few and comparatively slight fits, but after each of the violent paroxysms he had epistaxia. His respiration was regular, and he had no symptom of pulmonary disease. During the last four or five years of his life the fits were less frequent, and he was free from mania: in 1839 he had an attack of jaundice. His death seemed to be caused by a severe diarrhoea, which set in two months before the fatal termination. Upon examination, the brain and spinal cord, with their membranes, were found healthy, with the exception of a very slight effusion beneath the arachnoid; the cause of the diarrhoea was found in an extensive ulceration of the ileum. On opening the cavity of the chest, the left lung was found to be one solid mass of tubercles, and the superior third of the right was in the same condition; there were also several small cavities; the gall bladder was exceedingly small, contracted, and filled with calculi. Dr. Graves remarked, that one of the most remarkable features in this case was, that the patient had never any affection of the respiration, cough, or any other symptom from which the existence of pulmonary disease could have been suspected.

2. *Congenital Deficiency of a Portion of the right cerebral Hemisphere; Ossification of the Dura Mater; permanent and rigid Contraction of the left upper Extremity.*—Mr. Smith laid before the Society a series of preparations, with casts and drawings illustrative of congenital deficiency, or atrophy of certain portions of the brain, accompanied by a contracted state of the upper extremity of the side opposite to the cerebral deficiency. The first specimen which Mr. Smith exhibited was the brain of a woman æt. 50, who had been an inmate of the House of Industry for nine years. She had incomplete paralysis of the left side from her infancy, with a permanently flexed condition of the left hand upon the forearm; her head was small, but well formed; she was endowed with ordinary intelligence, and all her senses were perfect; she never had convulsions; the left upper and lower extremities were wasted; she died of bronchitis and pneumonia. Upon removing the calvarium, a sheet of bone, convex externally, was found covering the greater portion of

the right hemisphere of the brain ; it was elastic ; intermediate in consistence between bone and cartilage ; about four inches in length and two in breadth ; and deposited in the fine reticular tissue which connects the dura mater to the arachnoid membrane. Upon removing the dura mater, the right hemisphere of the brain was found to be atrophied ; the convolutions of the anterior and posterior lobes alone existed, and these were remarkably firm and hard, and exceedingly small ; the convolutions of the middle lobe were for the most part deficient, and their place supplied by the arachnoid membrane, which thus formed a great portion of the outer wall of the lateral ventricle. This cavity was considerably dilated, and filled with serum ; the right was not more than one-fifth of the size of the left hemisphere ; the optic thalamus not larger than a small nut, and extremely hard ; its inner edge presented a puckered appearance ; and the corresponding margin of the commissura mollis was contracted, so that this substance was of a triangular form, its apex towards the atrophied optic thalamus ; the atrophy also engaged the corpus striatum, crus cerebri, and corpus mamillare of the right side ; the optic nerves and corpus callosum were normal in every respect ; the left upper extremity was atrophied and contracted, the forearm being flexed upon the arm, the hand upon the forearm, and the fingers upon the hand ; the left lower extremity was also wasted. Mr. Smith exhibited three other preparations, shewing a greater or less deficiency of the central convolutions of one hemisphere ; they were all accompanied by contraction of the opposite upper extremity, and in one case there was also a congenital luxation of the hip joint : they were all taken from the bodies of lunatics, and in all the outer wall of the lateral ventricle was the seat of the deficiency. After a few observations as to the origin of the optic nerves, Mr. Smith concluded by drawing the attention of the Society to the imperfect paralysis which occurs in these cases, as contrasted with the complete hemiplegia which so often is consequent upon an apoplectic seizure, and alluded to the opinions advanced by Cruveilhier, in explanation of this phenomenon. (*Museum, Richmond Hospital.*)

3. *Malformation of the Liver.*—Dr. Gabriel Stokes exhibited a remarkable malformation of the liver, found in the body of an aged female, brought into the anatomical theatre of the Park-street School of Medicine. The left lobe was of the normal size ; the right of unusually small dimensions, remarkably flat, and of a circular form ; the gall bladder was placed at the posterior or thick edge of the right lobe, round which the cystic duct passed, in order to reach the transverse fissure ; the right lobe was scarcely as large as the normal Spiegelian lobe, which lobe, in this instance, was remarkably large. In this case the arteria profunda femoris arose from the external iliac, above Poupart's ligament. (*Museum, Richmond Hospital.*)

4. *Rupture of the Uterus.*—Dr. Murphy exhibited several preparations illustrative of this lesion, in one of which nature seemed to have made an attempt to repair the injury. In this case the rupture

occurred at the anterior part of the neck of the uterus, and the thin edge of the ruptured part was reflected on itself, so as to form a doubling or folding of the uterine parietes: the patient, in this case, survived the occurrence of the rupture eight days. In another specimen, the fibrous structure of the uterus appeared to have given way in the first instance, allowing of a protrusion of the mucous membrane, in the form of a hernia covered by the peritoneum. These membranes, however, ultimately gave way, and blood was effused into the peritoneal cavity: there were five or six distinct openings, formed apparently by ulceration in the mucous membrane. In this case the symptoms were remarkably obscure; so much so, that the patient was delivered without any suspicion of the existence of the rupture; she merely complained of pain when pressure was made over the region of the uterus. After delivery, however, the pulse continued remarkably quick, and in about eight or ten hours the symptoms of *matritis set in*, and were followed by those of *peritonitis*.

5. Putrescence of the Uterus.—Dr. Murphy also exhibited a specimen of what some have termed putrescence of the uterus—a state in which that organ is so completely softened, that its tissue is wholly destroyed.

The patient was a woman who had not come to her full time, having aborted in the fifth month. She came into hospital in consequence of rupture of the membranes, and remained there four days without any particular symptoms. On the fifth day she began to have slight labour pains, but continued in this state so long that it was thought advisable to interfere. On examination the head of a putrid child could be felt. The foetus was removed without much difficulty, and the operation was merely followed by a tendency to febrile excitement. On the second day the fever became more distinct, and assumed the character of puerperal fever, under which she sank rapidly. On dissection, the usual phenomena of putrescence were discovered: the cervix uteri, in particular, was converted into a black sloughy mass, and at its anterior part it was elevated into the shape of a large pyriform tumour, caused by the presence of a large coagulum.

6. Enlargement of the Liver, with Hyperæmia.—Dr. Greene presented the liver and kidneys of a woman who had recently died in the Hardwicke Hospital, with intense pain in the region of the liver, and considerable swelling of the epigastrium. On examining the liver, it was found to be of an intensely red colour and greatly enlarged, but without any other organic lesion. On the convex surface of the organ there was a depression, and a kind of puckering, not unlike the cicatrix of an abscess. There was no ascites, nor was the urine albuminous. The chief symptom during life was intense pain in the region of the liver, but there were no symptoms of peritonitis, nor had any trace of it been discovered on dissection. One of the kidneys contained a scrofulous deposit.

PROCEEDINGS OF THE DUBLIN OBSTETRICAL SOCIETY.

January Meeting.

Dr. SHEKLETON, V. P., in the Chair.

Dr. Halpin read a paper on Retroversion of the Uterus. Having given a sketch of the affection, its causes, pathology, and treatment, he related the particulars of a case, in which the restoration of the organ was attended with great difficulty. The usual method of replacing the uterus having failed, and the case appearing almost hopeless, it occurred to him, that if he could inflate the whole pelvis he might succeed in its reduction. Having obtained a recent bladder, he attached to it a stop-cock, and then introduced the bladder into the vagina. Placing his fingers over the vulva, so as to prevent its escape, he proceeded to pump air into it, by means of a syringe he connected to the apparatus. After a little while he had the satisfaction to find that the uterus yielded, and by continuing the same force he was enabled to restore the organ to its original position, and thus bring to a successful termination this interesting and critical case. Dr. Halpin proceeded to say that if a still greater force had been required, it might have been obtained by using, instead of air, water, whose power is irresistible. He concluded by pointing out, that a gum elastic bag, inflated to proper dimensions, will be found useful as a pessary in other affections of the uterus and its appendages.*

Dr. Kennedy, on the conclusion of the paper, complimented the author on his judicious management of the case. He had himself, however, tried air and water pessaries in cases of prolapse, but did not find them available; he had never used the pump, whose force rendered Dr. Halpin's contrivance a powerful hydraulic apparatus. In this way he considered it might perhaps be of service in restoring a retroverted uterus; but he did not think it could be applied to maintaining the organ *in situ* in that or other displacements.

Mr. M'Coy inquired why an elastic bag of the sort described would not be retained in the vagina as easily as the spherical body of our common pessaries.

Dr. Kennedy considered it was because there is in the former no solid resistance. In Dr. Halpin's mode of using it there was this difference, that there was a continued force applied *a posteriori* by the action of the pump.

Mr. M'Coy imagined that in both cases the resistance to the exit of the substance was afforded by the sphincter, and he could not understand why that resistance should not be as great when an air or water pessary was introduced, as when one of more solid material was employed.

* This paper was published in the last Number of this Journal.

Dr. Kennedy should have supposed both would have remained in with equal facility, but that he had learned the contrary by experience.

Dr. Sargent stated that the apparatus used by Dr. Halpin was very similar in its action to that described by Torbeck, as applicable to cases of hæmorrhage, and which he had, on a former evening, brought under the notice of the Society. It was an elastic bag, with a long tube attached, but inflated by the mouth, instead of a pump. This had the advantage over the ordinary plug, that it might be kept in the vagina much longer, and an examination might be made without removing it. If such an apparatus be used at all, he, however, thought that the addition of a pump must make it much more efficient.

Dr. Ireland considered it a great objection to *caoutchouc pessaries*, that they are so soon destroyed by the fluids they are exposed to.

Dr. Churchill should not *a priori* have supposed that the apparatus used by Dr. Halpin would have served his purpose, as he should have imagined the bag would have become distended as much towards the neck of the uterus as towards its fundus.

Dr. Beatty agreed in the principle that a dilating bladder expands in every direction it can; he thought, therefore, in the case detailed, it did fill up the vagina at *every* point; then the question was, whether, the distending force being continued, it would tear the vagina at its anterior part, or force up the fundus. The latter being found easier to effect, the fundus yielded and the organ was restored. Dr. Beatty then alluded to the interesting case detailed by Mr. Baynham in the *Edinburgh Medical and Surgical Journal*, a case in which, having found all ordinary means fail, he punctured the uterus through the rectum. The woman aborted twenty-five hours after and recovered. He thought the operation worth recollecting; one point connected with it, he considered interesting, in consequence of the discussion then going on in Dublin, with respect to the situation of the placenta; namely, that when the ovum was expelled, the placenta was found pierced by the trocar at the part which corresponded to the fundus uteri. She was then in the sixth month of her pregnancy.

Dr. Doherty was happy to hear Dr. Halpin lay it down as a rule, that restoration, should be accomplished in cases of retroversion, as quickly as possible, and that we should not trust to the temporizing use of the catheter. This assistance he considered the more imperative, according as the patient approached her fourth month of pregnancy, as then the uterus measures in length about as much as the diameter of the brim, and, therefore, if not replaced, may become irretrievably jammed between the pubis and sacrum. He stated that as far as he had seen of those cases, retroversion is mostly found in persons who have not only the pelvis roomy below, but an unnatural prominence of the promontory of the sacrum, contracting the brim above. He then alluded to the possibility of the bladder being divided into

two chambers by the pressure of the uterus, and that while the attendant is congratulating himself on drawing off some urine at each introduction of the catheter, the upper part may become more and more distended, until it ultimately sloughs. He thought Duparquet in error in considering antroversion the most frequent of those malpositions of the uterus.

Dr. Collins then exhibited to the Society a most interesting drawing of a case of inversion of the uterus, caused by the growth of a very large tumour, (measuring eleven inches in circumference,) from its fundus. The tumour was removed by Dr. Collins, and the patient recovered, although the uterus had been inverted for fifteen years previous to the operation.

Dr. Collins then read a brief analysis of forty cases of turning, which had occurred in his own practice. In it he detailed all the remarkable circumstances connected with each case, and pointed out the results of the operation. Dr. Collins's principal object in this paper was to impress on the Society the mode in which such cases should be reported; that the relator should not confine himself to the cause which rendered the operation necessary, and a statement of its having been performed, but should give the result to both mother and child, whether successful or otherwise, and that, in the latter event, the cause of death to each should be distinctly stated. Dr. Collins considered that on tables thus constructed alone, (and of which he himself gave a most elaborate one,) can a just estimate be formed of the value of that or any other operation in midwifery, or of the circumstances under which it should be resorted to.*

Dr. Ireland commented on the danger of resorting to turning before the os uteri is sufficiently dilated to admit of it, as productive of laceration of the lips of the os. These cases he considered are almost always fatal, because, though the body of the uterus may contract properly, the edges of the laceration cannot, and a constant stillbirth continues until the patient is exhausted.

Dr. Murphy was also of opinion that injury to the os tinctæ is very likely to prove fatal, but not alone from hæmorrhage, but by exciting or increasing inflammation, for in many of those neglected cases, where the waters have been long discharged, and the uterus actively contracted, a state of inflammation has been already excited.

Dr. Collins had seen those fissures prove as fatal as other ruptures of the organ. It is therefore only in extreme cases that forcible dilation of the os is justifiable.

Dr. Beatty having witnessed the fatality of trying to turn in cases where the shoulder or arm has been long wedged into the pelvis, considered evisceration the proper mode of delivery in such instances. As it can scarcely be expected that the child can be brought into the

* Dr. Collins's communications will appear in their original form in a future Number of this Journal.

world alive, he thought it better, if the circumstances be urgent, to take it away piecemeal.

Dr. Collins had never seen any case which demanded forcible dilation of the os uteri to effect delivery, except from hæmorrhage. He remembered one instance in which the blood was flowing in torrents before the os had sufficiently enlarged. As it could not be otherwise arrested, he cautiously passed his hand, but the uterus gave way. He should never dream of dilating the os artificially, to enable him to turn, in cases where the arm or shoulder presented, and the child was impacted in the pelvis, if he could mutilate the child, and thus deliver.

Dr. Kennedy had a case similar to Dr. Collins's in which the os gave way, but he considered the operation called for, as the woman was sinking at the time. He agreed in the principle that in cases of hæmorrhage the os will yield much earlier than under other circumstances. He recalled to Dr. Darley's recollection, a case of this kind he had seen with him in Liffey-street. There was, at the time, little, if any, dilatation, but the woman was pulseless from hæmorrhage, with almost the death rattles in her throat; but the os uteri yielded without difficulty. A short time after the delivery she was seized with pneumonia, notwithstanding which it was necessary to supply her freely with stimulants: she ultimately recovered. Dr. Kennedy concluded by inquiring from Dr. Collins, in what proportion of his cases of ruptured uterus was the peritoneal surface alone engaged?

Dr. Kearns, of Westport, mentioned his having been called to four cases of ruptured uterus, which had occurred without any interference. In two the child escaped into the cavity of the abdomen; in one he delivered through the rent; in the others he removed the child after the death of its parent. He thought four cases a large proportion to present itself within his individual knowledge. Labour in all the cases had been long and strong.

Dr. Murphy, alluding to cases of rupture confined to the serous coat of the uterus alone, thought that the laceration is in some degree caused by commencing inflammation. He suspected there are two distinct ways in which inflammation may give a tendency to the accident; firstly, by producing a state of the peritonæum in which it will not yield; and secondly, by producing softening of the uterus and the formation of an aneurismal sac under the serous coat, which bursts during labour.

Dr. Doherty thought Dr. Murphy's observation with respect to the tendency given by inflammation to the production of this injury might perhaps be sustained by the *post mortem* appearance of a case which he witnessed. In it there was not only the cribriform condition of the peritonæum, but some gelatinous effusion beneath it. The patient lived six hours after delivery.

Dr. Collins saw only one case of the kind, and in it there was no appearance of inflammation. His patient died immediately after delivery.

Dr. Beatty stated that in White's case also, there were merely scores, but the hæmorrhage produced was sufficient to cause death.

Dr. Kennedy wished he could say the affection had so seldom presented itself to him as to Dr. Collins. He could not then state the exact number he had met with, but had seen several of them, and suspected that many of the cases recorded of sudden death after delivery, without any known cause, should be assigned to this lesion.

With regard to Dr. Murphy's observation, he remarked, that in some cases no appearance of inflammatory action could be discovered. Generally such cases go off suddenly; some, though the fewer number, live for a few hours after the accident, and then inflammatory products are found. He thought the length of time the patient alluded to by Dr. Doherty survived the occurrence, was sufficient to account for the gelatinous effusion, without supposing any inflammation of the peritonæum pre-existed.

February Meeting.

Dr. JOHNSON in the Chair.

Dr. E.W. Murphy read a paper on the Passage of the Fœtal Head through the Pelvis, which shall appear in the next number of this Journal.

Dr. Dwyer read a paper on Hæmorrhage, occurring during, and subsequent to the third Stage of Labour. Having pointed out the means by which freedom from this accident can be best insured, namely, by keeping the patient cool, quieting the circulation, removing all sources of excitement, and maintaining a due proportion between the expelling and resisting forces; he directed attention to the utility of following down the uterus with the hand, during the escape of the child, and afterwards of continuing our pressure until we are satisfied that it will remain of its diminished capacity. He dwelt on the injurious consequences which result from hurrying away the placenta, and on the proper mode of employing external stimulation for its removal, when this becomes necessary, remarking that the non-expulsion of the afterbirth, under adroit and properly-directed manipulation, becomes, in the hands of an experienced and practised attendant, a surer test of the presence of spasmodic action, or morbid adhesion, than any which has been proposed. He noticed the difficulties attending this trivial, but important, operation, arising from the inordinate action of the recti muscles keeping the hand off the uterus, or from a state of obesity preventing our distinguishing it; and alluded to the possibility of a distended bladder being mistaken for an enlarged womb, and the dangers that would result from pressure being, under such circumstances, applied. He then considered the various varieties of hæmorrhage, their causes and treatment. He commenced with that arising from want of uterine action alone, both as external and internal hæmorrhage, and gave his testimony in favour of the practice of applying a binder round the abdomen in every case, and, if necessary, of inserting pads beneath it. He described the different forms of apasmodic

action of the uterus, assigning to the inner os its most frequent seat, the mode of dilating the stricture, and of causing the uterus healthily to expel the placenta, remarking that when that substance has been detached, and we feel the womb contracting, it is often of use to lessen its contents by withdrawing the mass along the wrist and arm, while the hand is still retained in its cavity. He then passed to hæmorrhage depending on morbid adhesion of the placenta, either alone, or, as it frequently is, combined with spasm, and pointed out the proper mode of separating the adhering part. He extolled the practice of giving small doses of mercury after such an operation, so as to anticipate the inflammation which may be expected. Under this head he noticed the treatment to be adopted in cases in which the practitioner is called many hours after delivery, the placenta still remaining *in utero*. He thought the proper plan to pursue was, if possible, to remove the mass, but if this be not feasible, to apply compresses and binder, and administer stimulating enemata. The ergot he condemned as a means to be resorted to to bring away a placenta under ordinary circumstances, but in those then under consideration, he thought it might be tried, and instanced a case in which Dr. O'Reilly had used it with success. He then passed in review the causes of hæmorrhage, the constitutional peculiarities which predispose to it, and the mode of treatment to be adopted when it occurs after the completion of the third stage of labour, noticing that form pointed out by Gooch, and a still rarer variety arising apparently from disease of the lower part of the organ, which, after death, appears as if its tissues were there hypertrophied. The os and neck in such cases, he remarked, afford to the finger, introduced within, the sense of a gristly, rigid mass encircling it, and possess, apparently, as little capacity for dilatation as power of contraction. In the treatment of hæmorrhage after the expulsion of the placenta, he laid great weight on the utility of ergot; this being, in his opinion, the period at which its beneficial effects are most observable. He noticed the introduction of the hand and the other measures usually resorted to, such as cold dashing, &c., pointing out the precautions which should guide us in their employment, and stated some instances in which, after other means failed, he had witnessed the best effects result from the injection of cold water into the uterine cavity, a practice which he had seen particularly useful in secondary hæmorrhage. He pointed out the benefit of administering an opiate after the bleeding had been subdued, in order to quiet the restlessness of the patient, and thus remove a frequent cause of its recurrence. He finally dwelt upon the importance of the subject, and entreated his junior auditors to arrange in their minds the various means of arresting this awful complication, so as to be able to avail themselves of them without hesitation, when required, describing, in forcible terms, the pitiable condition of an attendant called to such a calamity, who loses his presence of mind, and is unable to control it; whilst on the other hand he depicted the thrilling pleasure which results from the suc-

cessful management of such a case, and from the consciousness of having been instrumental in saving a fellow-creature's life.

Dr. Collins then remarked, that there was one mode of applying cold, which had not been mentioned; he meant that of injecting a cold fluid into the rectum. He generally used equal parts of wine and water, and had often found that plan of advantage, and unattended with danger, while he should certainly feel apprehensive of the consequences of injecting the uterus itself.

Dr. Murphy wished to know Dr. Dwyer's experience of the use of opium in hæmorrhage. He thought it was like beginning at the wrong end to expect the uterus to contract, unless we control the irritability of the system, and therefore considered a combination of stimulants, with anodynes, of most benefit. He was of opinion that we should be very cautious in using refrigerants without attending to that circumstance: opium too he always administered before introducing his hand.

Dr. Dwyer had seen opium used in the earlier stages of hæmorrhage, and apparently with advantage; but it appeared to him most suitable to the stage of restlessness which succeeds. Dr. Hull's practice was that of giving an opiate immediately after delivery, and he thought it a useful one to guard against flooding in nervous, irritable patients. Cold he considered should be resorted to with caution, and if not soon successful, given up.

Dr. Shekleton agreed with Dr. Collins that the injection of cold water into the rectum is most beneficial: for that observation Dr. Shekleton was indebted to the late Dr. Evory. With respect to the employment of cold, his opinion was, that its effects would be best insured by combining it with pressure. Thus, pressure on a wet napkin folded and laid over the uterus would be found one of the most powerful means of controlling hæmorrhage. In every case he maintains a pressure on the uterus, either himself, or by the aid of an assistant, for an hour after delivery, and never leaves his patient's room for two hours.

March Meeting.

Dr. COLLINS in the Chair.

The following letter, addressed to Dr. Kennedy by Dr. M'Donnell, of Belfast, was read to the Society:

"Belfast, January 29, 1840.

"DEAR DOCTOR,—I have long wished to ask you, if you have not already done it, to make a distinct observation whether it be an indubitable fact, that the colour of the blood in the umbilical veins and arteries differs in the same degree and manner as that of the pulmonary veins and arteries from each other. I know this opinion has been entertained, nor do I know of any one denying it, from the time

of Lower. Ravenherst has repeated the assertion, yet not saying that he *saw* it distinctly with his own eyes, or tested it, in any particular specified manner. Nuck published it, *from* Ravenshoft, in the third edition of a work of his, at Leyden, in 1723, in duodecimo: to save you time in looking for it, I shall transcribe the words.

"The quotation is § 17 'Vena hæc umbellicalis hoc obtinet peculiare, quod sanguinem vehat, arteriosa similem, hoc est, colore donatum, *intense* rubicundo, quod nusquam (præterquam in vena pulmonali) in reliquo venoso genere conspicitur, et aliunde deducendum non erit quam a particulis æreïs, sanguini huic copiosius admixtis.'

"From an expression in the last sentence of the passage, I think these observers must have lived about the time of Mayow, who was the first, I believe, who attributed the redness of the arterial blood to the absorption of oxygen; how long before 1723 Ravenherst himself had published it I do not know; but what I am anxious to determine is this: whether, if the funis be tied in two places, at the greatest allowable distance from each other, say with four ligatures, and the middle part being cut out, the blood of the vein and artery be carefully and suddenly compared, (without allowing time for absorption of oxygen, either through the vessels, or after its escape,) there be this distinct and decided difference of colour, or any other great difference, such as coagulability, &c.; of course the ligature must be first fixed on the placental side. I have now been for forty years observing, more or less, according to my opportunities, the number of the pulse in the foetus before respiration, and, except in two cases say out of forty, I never found it above 80, seldom above 60 or 50; but since the French discovered the *sounds* of the foetal heart to be far more than double this number, I have been confounded how to reconcile my own observations with their's, for I find their observations upon the *sounds* indubitably true. The average number of sounds is above 200 per minute, perhaps about 225, often 240, or even upwards. Now this difficulty is constantly perplexing me how to form a supposition to explain the facts, or which of the facts is it that cannot be true? I lately found the number of the pulse in the chick '*in ovo*,' as distinctly and plainly as ever I found the human pulse; and this not once, but in six or seven experiments, made on purpose, with great care, pushing my finger into the egg and continuing to count for half an hour in each; and in all these experiments the pulse of the heart, (I could feel no artery,) was very slow; seldom above 80 or 90, never above 100; yet the pulse of the chick, when hatched, is innumerable, and in all birds it is very rapid; but in no bird, large or small, have I been yet able to hear any *double* sound of the heart, it is only *one* sound for each pulse, and perhaps this sound is only the *impulse* of the ventricle. Nor can I yet account for the great strength, one might say preternatural, of the pulsation of the arteries in the umbilical cord of the human foetus. Can it arise from our feeling the two arteries beating simultaneously?—it cannot be from the stroke of the right ventricle passing into the aorta by the

canalis arteriosus, because that would tell upon all the arteries of the fœtus as well as on those of the cord, whereas I find the pulse in all the other arteries very moderate in strength, compared with that of the cord.

"I can find no stethoscopic sounds in the turtle. I made several trials to discover whether the chick 'in ovo' generated heat, and had negative results. I could not compare the colour of the blood in umbilicus of the chick with the other blood, but Jeffrey says he found that of the umbilical vein brightest: the experiment must be difficult."

"I am, dear Doctor, your obedient Servant,
"JAMES M'DONNELL."

The following communication has also been received from the same author :

"*Belfast, February, 1840.*

"DEAR DOCTOR,—Since seeing you in Belfast, it has occurred to me to request that you would apply your ear or stethoscope to the cord, before respiration is established, and determine whether the 'tic tac' can be heard in it, or any thing of the double pulse, which is sometimes felt, in health and disease, in adults; and which has been called a 'dirotic pulse.' I have read a paper, in which you are frequently mentioned, in a periodical 'Encyclographie des Sciences Medicales,' tom. x. 3rd series, Article 'Experience,' for September, 1839, from p. 190 to 210, giving an account of a thesis on auscultation, published or read at Strasburgh, in December, 1838, by Carrière. I think it probable that Carrière, like most, if not all others, confounds the *sounds* of the heart with the *pulses*, by an inference that the *pulses must* be half the number of the *sounds*, which, I admit, in the present state of knowledge, to be a very natural opinion; but yet it is only an opinion grounded on the hypothesis that two sounds indicate *one* pulsation, a thing, which, although true in the child, may be false in the fœtus, and which I believe to be most false, until I find some person who has the *means* of determining it, and the disposition to doubt it, stating the very facts of the case. I can very easily hear four sounds of the fœtal pulse per second, 240 per minute. I know that I have frequently heard a great many *more*, but there is a good deal of care and thought necessary in *counting*, after you exceed this number. I think I have counted six per second when favourably circumstanced, as to silence and perfect composure. I have reason to believe that some musicians can count sixteen notes in one second, each being distinctly heard as an articulate sound; it is difficult, therefore, to say when a number is 'innumerable.' When a wheel with fifteen or sixteen teeth is turned round in a second, I am told you can distinctly hear every tooth striking a card: but the fœtal sounds are often more difficult to count than notes in music.

"Mr. Locke says that we can see distinctly only eight objects, in succession, per second, and it would be useful to ascertain whether

the different senses of touch, taste, smell, and hearing follow any similar rule to this of vision. I am not sure whether Locke made any accurate and philosophical experiment, so as to determine his point with exact precision.

"I am, dear Doctor, your very obedient Servant,
"J. M'DONNELL."

Dr. Collins remarked that Dr. M'Donnell did not state the circumstances under which he reckoned the foetal pulse before birth.

Dr. Ireland had reckoned the pulsations of the cord in cases of funis presentations, and could confirm Dr. M'Donnell's statement. During the intervals of the pains they were seldom above 70 or 80 in the minute, and yet it is well known the foetal heart beats at least 120. To this subject Dr. M'Donnell drew his attention at a meeting of the British Association.

Dr. Dwyer could not coincide with Dr. Ireland. He has often been called by the pupils of the hospital to a case which they supposed one of funis presentation, in consequence of detecting a pulsation on vaginal examination, and has been able to point out that it arose from an artery belonging to the mother, and that it differed from that of the funis, in being much slower than the beats of the foetal heart, with which those of the funis are always synchronous.

Dr. Collins remarked that it had not been explained why the pulsations of the funis become slower when pressure is made on it.

Dr. Sargent stated that ever since Dr. M'Donnell broached the idea, the subject had puzzled him, but he at last came to the conclusion that that gentleman was deceived, as pressure of the uterus during a pain diminishes in frequency the pulsations of the foetal heart, and he thought that, by maintaining an unremitting pressure, that was one way in which ergot may prove fatal to the child.

Dr. Collins observed that the circumstances under which the foetal pulsations are counted, considerably influence their number. Thus, the action of the heart before the death of the foetus in cases of tedious labour is much accelerated.

Dr. Sargent was aware that Professor Macartney entertained the opinion, that there was no difference in colour between the umbilical vein and arteries.

Dr. Murphy had watched this point, and could perceive no difference. In those cases where no respiration was established the blood from the arteries was not florid.

Dr. Ireland, from his observations, came to a totally different conclusion. If the vessels be opened at the same time, a striking difference will be observed, the blood of the vein being red like arterial blood. He believed that to a Professor in Dublin we owed the idea that the placenta is a glandular organ. Notwithstanding Dr. Dwyer's remarks, he was convinced that Dr. M'Donnell's views with respect to the foetal pulse were correct, as he has tested the matter while turning, and after birth, but cannot account for the discrepancy between the pulsations of the heart and cord.

Dr. Doherty remarked that he could not agree with Dr. Ireland

as he had the day before an opportunity of turning in a twin case, in which the second child had been left *in utero* for six hours after the birth of the first. In that instance there was no uterine action to affect the pulsations, and from those he felt on his hand during the operation he should certainly say the cord was beating at least 120. The mother's pulse was not much more than 70.

Dr. Kennedy said he was sorry he was unable to be present at an earlier period of the evening, and though he had only just entered the room, and was not therefore aware of the opinions which had been offered by the gentlemen present, he could not refrain from making a few observations on the letter which had been laid before the Society, and which he had received from its venerable writer some time since. "Never," observed Dr. Kennedy, "shall I forget the interview which I lately had with Dr. M'Donnell, in Belfast. This gentleman is no doubt well known to most of my auditors. He is a man very far advanced in life, and has latterly suffered much from ill health, but exhibits all the spirit, the enthusiasm, and the energetic mind of youth. His case is a rare exception to the relations observed to hold between corporal decay and the loss of mental powers. The inroads of time, under which his bodily strength has yielded, so as to leave his frame enfeebled and exhausted, appear to have acted upon his mental qualities in rendering them more vivid and acute. He still, as his communication evinces, pursues, and, if possible, with increased energy, the path of scientific investigation, for a love of which he has been distinguished, and which renders him an ornament of the Profession, and an object, as he should be, of imitation, as well to its senior as its junior members." Dr. Kennedy then went on to observe, that with respect to the foetal pulsations, Dr. M'Donnell did not question the fact of their rapidity, as heard with the stethoscope, but the difficulty which presents itself to his mind is, that when felt by the finger the pulsations are slow. There can be no doubt they are heard rapid, and occasionally felt slow, but Dr. Kennedy considered the fact could be explained by the difficulties which the circulation must experience during the passage of the child through the pelvis. Another point is the strength of the pulsations in the cord. It has been observed that the extent of impulse is in an inverse ratio to the thickness of the walls of the heart. Now both ventricles act on the blood in the foetus, and consequently, there is great strength in the circulation at birth, and the impulse communicated through all arteries of the body is strong at this period. Besides the inherent power of propelling the blood existing in the vessels of the funis themselves must add to this effect. This power can be exhibited by making a section of the funis, separating a portion from both placenta and child, when the pulsations are often observed to continue, and the contained blood to be expelled *per saltum* for some time. Dr. Kennedy observed, that in order not to fatigue the Society by adverting to matters which may have been already canvassed, he should not go into the other questions raised in Dr. M'Donnell's letter, not having been in

time to hear the letter read, nor the discussion that had already taken place upon it.

Dr. H. Kennedy observed, that perhaps the difference in structure of the vessels of the cord, when contrasted with other arteries, may explain the strength of the funic pulsations.

History of a complete and recent Luxation of the Wrist backwards, with Reflections upon the Mechanism and differential Diagnosis of this Dislocation, by M. Voillemier.—Louis Levillain, aged 27, was admitted into the Clinical Hospital, September 28th, 1839; he had fallen from the third story of a house into a court-yard; he was immediately carried to the hospital in a state of insensibility, with loss of the power of voluntary motion, fixed and dilated pupils, and stertorous respiration; he had a comminuted fracture of the left humerus, and the left wrist-joint presented the appearances usually ascribed to luxation of the carpus backwards; as the patient was evidently dying, the reduction of the bones was not attempted: death took place four hours after the occurrence of the accident.

Autopsia.—The forearm was semiflexed, the hand but little inclined to the side of flexion, and the osseous plane represented by the metacarpus and the carpus was nearly parallel to that of the forearm; the thumb was extended, and abducted, its internal border corresponding to the anterior surface of the index finger; the fingers (themselves in a state of extension) were flexed upon the metacarpus. The hand was not abducted, but was completely displaced towards the inner border of the forearm. At the posterior inferior part of the forearm, there existed a transverse prominence, apparently formed by the carpus, upon a level with the back of the hand, but elevated about eight lines above the posterior plane of the forearm; it was rounded, and presented to the touch no bony ridge, ("arête,") neither did the skin form a transverse fold at its base, in consequence of the inclined plane which the extensor tendons, separated from the body of the radius, formed in their passage from the forearm to the back of the hand; the distance from the summit of this projection to the posterior extremity of the middle finger exactly corresponded with the length of the carpus and metacarpus of the right hand. At the anterior, inferior part of the forearm, there also existed a transverse eminence, situated eight lines below that which was noticed behind; it was more remarkable at the outer than the inner side, towards which it gradually diminished. Below this the skin formed a well-marked transverse fold; for here there was no inclined plane, as the flexor tendons, which now covered the lower extremity of the radius, formed nearly a right angle with the palm of the hand. At the outer angle of this transverse prominence, the styloid process of the radius was recognized, and both it and the styloid process of the ulna, (which a slight swelling somewhat obscured,) appeared to preserve their normal relations to the bones of the forearm. The anatomical examination of the specimen removed all uncertainty as to the nature of the injury; it was in truth a luxa-

tion of the wrist. The external lateral and posterior ligaments of the articulation were broken, the anterior was torn from the edge of the radius; the internal lateral ligament alone was unbroken, but the styloid process was detached from the ulna; there was no other fracture either of this bone or of the radius; the carpal bones were uninjured, with the exception of the os scaphoides, a very superficial layer of which was removed, close to the attachment of the posterior radio-carpal ligament. The lower extremities of the radius and ulna lay in front of the first range of carpal bones.—*Gazette Médicale*, April, 1840.

This interesting case appears to us to place beyond doubt the possibility of the occurrence of such an accident as luxation of the carpus backwards, from a fall upon the hand. We are aware that Dupuytren and many other eminent surgeons, have maintained that the cases hitherto recorded as examples of luxation of the carpus, have in reality been instances of fractures of the bones of the forearm, close to the wrist-joint, or separation of the epiphyses; and we have seen in the Museum of the Richmond Hospital, an example of the latter injury, which was originally supposed to have been a luxation of the carpus backwards. These injuries were made the subject of an important communication at the Pathological Society, (December 18th, 1838,) by Mr. Adams, who expressed his opinion that as yet there was no evidence of the occurrence of such an accident as luxation of the carpus. It would appear to us that the case recently recorded by Voillemier, places the matter beyond doubt, and we would refer to the interesting memoir of this author for many important observations upon the differential diagnosis of luxation of the carpus, and fracture of the bones of the forearm, close to the wrist-joint.

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NOTICE TO CORRESPONDENTS.

Papers have been received from Mr. Smith, Dr. Churchill, and Dr. Murphy.

THE
DUBLIN JOURNAL

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1 JULY, 1840.

PART I.

ORIGINAL COMMUNICATIONS.

ART. XX.—*On Cod-Oil.* By M. DONOVAN, Esq.

AN oil procured from the liver of the cod-fish, has obtained a good deal of celebrity during the last four or five years in Germany and France, in the cure of certain forms of scrofula. Dr. Taufflied has published a statement, in which he details his successes and his failures, with so much candour, that the reader of it is at once enabled to judge of the true value of cod-oil, as a medicinal agent. It may be proper therefore to preface my account of the preparation of this remedy by a short sketch of the chief facts brought forward by Dr. Taufflied.* Out of several cases adduced I shall extract but two, and then proceed to the general consideration of the advantages derivable from this medicine.

A young man of scrofulous constitution was affected with pain in the dorso-lumbar region. At length a large abscess

* See Gazette Medicale, Nov. 9, and London Medical Gazette, No. 23.

formed by congestion near the sacrum. Issues were made, but without advantage; and he soon fell into such a state of marasmus that speedy death was feared. He then commenced the use of cod-oil, four table-spoonfuls a day. A gradual improvement soon took place. In six months he had gained flesh and walked with ease. There remained in the sacro-lumbar region, an abscess of the size of a newly born infant's head, which threatened to break, and fluctuation was quite manifest. It remained stationary nearly two months; and in about three months more it had entirely disappeared. The use of the oil was then discontinued. In five months more, a new abscess formed; the oil was resumed; the pus was re-absorbed, and the patient remained well. In two years and a half he had consumed about thirty-six pounds of oil of cod.

A girl, aged 10, of a scrofulous constitution, had caries of the first metatarsal bone of the left foot; the bone was deprived of its periosteum, and very rough. The bone of the right cheek was much swelled. The disease had for three years resisted treatment, when the cod-oil, in dose of three spoonfuls per day, was directed. In five or six months the swelling of the metatarsal bone had disappeared; the denuded portion was covered with healthy granulations, and the fistula which opened into it, and had been open for three years, was at last completely cicatrized; the malar bone had returned to a healthy state. The cure of this patient was assisted by some local applications.

In all the cases recorded, the local treatment, when employed alone, succeeded but imperfectly; the internal use of the oil sufficed to effect a cure, in certain instances, while in others it failed; the *mixed* treatment was always efficacious. Scrofulous caries is both an external or local disease, and a distemper *sui generis*, depending on a generally vitiated temperament, of which it is in some degree the expression or product. Whether we admit a real scrofulous diathesis; or whether we attribute to the lymphatic constitution of certain

. . .

persons, the particular character which chronic inflammation of the bones puts on in them, we must ever acknowledge the necessity of altering this morbid condition of the system, before we can hope for a cure from the employment of local or surgical means. But the oil of cod, when administered with perseverance, is able to effect an alteration in the constitution, and imprint a favourable direction on the organs of nutrition. This advantageous effect of the oil has shown itself, in the majority of the persons who have taken it, by the more or less speedy return of strength and plumpness, and by an indisputable influence on the scrofulous disease itself; hence the oil of cod will fulfil the indications of the general treatment.

But caries being a local disease, requires, in addition, some special treatment. Against burrowing sores, fistulous passages, and particularly ulcerations and swelling of the soft parts, internal treatment can do nothing. Hence the cure of scrofulous caries requires a mixed treatment.

Seven children suffering from marasmus and rickets took the oil, and *six of them were completely cured*; the seventh did not persevere.

The following is a summary of the effects observed: when properly administered, cod-oil cures scrofula of the bones; marasmus, and chronic arthritis of a scrofulous or rheumatic form. Caries, accompanied by a sore and swelling of the soft parts, requires the treatment with oil to be seconded by local applications, such as compression, and ioduretted alcoholic fomentations, cod-oil is of no avail against gouty arthritis, or swelling of any lymphatic glands but those of the abdominal cavity; its action seems doubtful or null in scrofulous phthisis when at all advanced. To produce advantageous results, in any disease, the use of cod-oil must be persevered in for several months.

I now proceed to describe the method by which I have obtained this oil, and to notice some circumstances, without attention to which I conceive that the internal use of it may

produce some disturbance of the constitution. At all events we must lessen the repugnance which most persons would feel to the swallowing of fish oil, by procuring it free from all disgusting qualities so far as relate to smell, taste, and colour.

Every one knows that the livers of fish contain a great quantity of oil, deposited in cells. In all fishing villages on the sea coast a part of the occupation of the fishermen is the extraction of the oil. The livers, contained in an iron pot, are heated on the fire until their substance is broken down: the oily pulp is then thrown into a canvass bag, and drained with pressure. The *mare*, which remains in the bag, holds much of the oil absorbed. A second heating and pressing separates much of it, but the produce is dark-coloured and strong-scented. Even after this, some of the oil is retained. The portion lost will be much smaller in quantity if the livers had been previously allowed to run into partial putrefaction: but in this way of proceeding, quantity is increased at the expense of quality, for the oil procured has a very bad smell. It is in this state that cod-oil is generally met with, and it is one of those known in commerce under the name of train-oil. The livers of all other fish are also added in the boiling of British train-oil, and the fat of the porpus, caught on some parts of the western coast of Ireland, contributes abundantly to the local produce. Common train-oil is always in a state that indicates the putrescence of the materials from which it was procured, as well as the use of a high temperature in the process of extraction.

Putrescence and a charring heat are each capable of generating a poison in animal substances, under certain circumstances: and it is necessary to bring the facts before the notice of those who would wish to manufacture the oil in question for medical use. A number of recorded facts prove the deleterious influence of incipient putrefaction on aliments. Of seven persons who partook of what is called Italian cheese (a compound of seasoned scraps of pork, which in this case was mouldy) three died, and all were violently sickened. Eight persons who had eaten

of a veal and ham pie, pretty far advanced in decomposition, were taken seriously ill, and narrowly escaped death.* A putrid egg is ranked by writers on toxicology amongst poisons. Even vegetable matter becomes poisonous by incipient decomposition; bread made from mouldy dough, even when the mould was carefully removed, has produced poisonous effects.

Those who engage in the dissection of semi-putrid human bodies have good reason to appreciate the virulence of the poison generated in them. I find by inquiry amongst carrion butchers that they suffer from a poison similarly generated in horse-flesh during decomposition.

Even the effluvia of putrescent animal matter is a virulent poison: the case of M. Faure of Narbonne proves this. He purchased a house previously occupied as an anatomical hall, and employed three men to dig a cave in the cellar. In digging, they came to a place which had been the common receptacle of the remains of human subjects; and on extracting a few stones, an offensive putrid air rushed through, which suffocated them. M. Faure then descended a few steps; he fell senseless, and died in four days. Nine other persons entered to carry out the bodies, and of these six died. Every one is acquainted with the fatal nature of the putrid halitus which was exhaled from the bodies in the burial-place, *Des Innocens*, at Paris. The decay of a whale cast ashore at Egmont occasioned a pestilential fever. And according to Galen unburied dead bodies lying on the field of battle have caused the breaking out of plagues.

All these facts, and many others that might be adduced, prove the deleterious influence of putrefaction, and the caution with which we should introduce into the stomach any kind of animal matter tainted by so virulent a poison.

It is therefore obvious that in preparing a remedial agent from the livers of cods, we must not seek to obtain an increased

* Journal de Chimie Med. 1832.

quantity of oil by permitting putrefaction to set in. It is scarcely necessary to advert to the danger of swallowing common train-oil; were there no other risk, such a dose would by its smell and taste prove sufficiently repugnant to the senses, and could scarcely be swallowed without occasioning immediate rejection by the stomach, and total intolerance of any farther attempt.

It is very true that the Tonquinese and Greenlanders eat eggs with impunity in any stage of putrescency. The latter eat their fish absolutely putrid, and highly relish its piquancy. The Icelanders do not eat the flesh of the shark and sun-fish until it has become tender by putrefaction, and the Esquimaux swallow very strong smelling train-oil. Such cases afford instances of the influence of habit persevered in from infancy. In Britain we are fearfully cautious in the selection of our mushrooms: but in Russia they eat with high relish and perfect impunity those that would poison us.

We have now to consider the effects of heat on animal oils. We know that these oils, from being insipid and inactive, become, by the application of a boiling heat, acrimonious in taste, and highly powerful in the effects which they are capable of producing on the animal economy. There is on record, a case of poisoning by goose-grease: the change in the qualities of the fat of this bird must be attributable to the high temperature it had endured during the roasting. Dippel first pointed out the medical energy which animal oils acquire by a boiling heat. The distilled oil which goes by his name is exceedingly powerful; it is capable of causing death: and Hoffman mentions that two drops of it being dissolved in half an ounce of spirit of wine, and one quarter of this quantity being given to each of four men, a copious perspiration in all the cases ensued. This indeed is a proof of what great energy was acquired, simply by the application of a boiling heat to insipid powerless oil. In by-gone pharmacy real spirit of hartshorn was the favorite antispasmodic, on account of the empyreumatic oil

which it contained. By distillation of animal oils we obtain some of those poisonous substances which the researches of Reichenbach have within a few years brought to light.

Now although in the extraction of oil from cods' livers by means of heat, there is no likelihood that heat would be applied in such a manner as to produce actual poison, yet it is easy to conceive that an approximation might be made to an extent that might render the oil acrimonious and likely to disagree with the stomach and bowels. We know that when castor-oil seeds are parched, the oil obtained is apt to produce nausea and griping—a change attributable to a slight alteration in the constitution of the oil: for although there is an acrimonious principle in the seeds naturally, Guibourt has shown that it is very volatile, and is expelled by a moderate heat. We know also that when butter has been kept for some time at too high a temperature it acquires the property of sickening the stomach.

The preceding facts and considerations shew that some caution ought to be employed in the manufacture of such train-oil as is intended for medical use, and that all kinds of it are not to be used indiscriminately. We must sedulously guard against putrefaction and charring. I have made trials of the temperature, adequate to the extrusion of the oil, without any ill effect on its taste or its capability of resting lightly on the stomach, and find that the best oil is afforded at 192°.

I proceed to describe the process. Take any quantity of livers of cod, throw them into a very clean iron pot, and place it on a slow fire, stir them continually until they break down into a kind of pulp: water and oil will have separated. When a thermometer plunged in the pulp will have risen to 192°, the pot should be taken from the fire, its contents transferred to a canvass bag, and a vessel placed underneath. Oil and some water will run through. After twenty-four hours, separate the former by decantation, and filter it through paper.

This oil, thus prepared, is of a pale yellow colour; its smell is weak, and resembles that of a cod boiled for the table when

in excellent condition. Its taste is bland, by no means disagreeable, and as might be expected is totally free from rancidity. It is very liquid. Its specific gravity in my trials was 0.934, although in all the published tables of specific gravities it is stated to be 0.923. In cold weather it deposits much stearine, and this ought not to be separated.

No objection can be raised against the internal use of this oil on the grounds of delicacy. Let it be remembered that the cod's liver (the chief ingredient of which is the oil) is itself a delicacy: that it enters into a popular sauce used with the fish; and that it is cooked into several forms for the table. That it is nutritious, we have abundant evidence from the analogy of other fish-oils on which whole nations to a great extent subsist and are well nourished. Perhaps its therapeutic qualities depend in some measure on its power of modifying the digestibility of the food, of rendering the whole mass more easily assimilable, and of bringing it to that state which is best adapted for the nutrition of persons in the particular condition of health for which this oil is proved to be a remedy.

The product of pure oil is very variable; I have obtained so much as a gallon (wine measure) from twenty-eight pounds of livers, the produce of fifty cods. Sometimes the livers will afford much less. The runnings of the first heat only should be used: a second heat will supply more oil, but it will be comparatively strong-smelling, ill-tasted, and deep-coloured. The above estimate is true only when the fish is in the best season, and fully grown. Towards the close of the season the produce will be less. The livers of some cods are flaccid and lie flat without plumpness on a plane surface. These afford a deficient quantity of oil, a brown, strong-smelling quality, and a large portion of brown water: they are totally unfit for use, and their oil is disgusting. The livers are often found diseased and dark-coloured; such afford a very bad oil, and are of course to be rejected.

I have made inquiries at different fishing villages on the

coast of Ireland as to the quantity of oil procured from a given quantity of livers. The estimates obtained differ very much. On the south-western coast the produce, as stated to me, is an imperial pint from twelve livers. On the eastern coast a pint is said to be procured from one liver on the average. The difficulty of obtaining correct information from the lower orders, unaccustomed as they are to habits of accuracy, is very great: I suspect that the latter estimate is too high, and the former too low. The statement founded on my own trials I consider pretty near the truth.

I have also made inquiries in some fishing villages as to the season when the livers are largest and in greatest perfection. On the west coast they consider the beginning of the year the best season, and on the east the month of November.

Thus, in preparing cod-oil fit for medical purposes, three chief things are to be attended to: the livers must be perfectly healthy; they must be as fresh as possible, the least putrescency being injurious; and the heat at which the extrusion of the oil is effected must not exceed 192°.

ART. XXI.—*Medical Communication from Paris*. By Sir
FRANCIS W. SMITH, M.D., F.C.S.

TO THE SECRETARY OF THE ASSOCIATION OF PHYSICIANS.

Paris, 8 Rue Royale, March, 1840.

DEAR SIR,

Having observed by the papers that the Association has kindly constituted me one of its corresponding members, I am desirous, at the same time that I offer my acknowledgments for the distinction, to prove my anxiety to promote the objects of the Association, by making an early, though not a valuable, contribution to its stock of original communications; at a future time I hope to produce some-

thing which may still better prove to the Association, that in removing from amongst its members, I have not forgotten that distance and time have no effect in diminishing the feelings of scientific brotherhood which I have always had the happiness to enjoy in my intercourse with them.

F. W. SMITH.

BISCUITS D'OLLIVIER.

It will be in the recollection of the Association, that cases will occasionally occur in which mercury is very strongly indicated, but in which the best directed efforts will fail in enabling the constitution to receive it. I allude particularly to those cases, principally of a specific character, where the greatest necessity would appear to exist for producing the constitutional effects of mercury; but where the bowels shew an intolerance of the mineral, so decided, as to cause the practitioner in despair to give up its use, its introduction, even by inunction, producing the same poisonous effects as where it had been introduced by the mouth; early in the past year it was my fortune to meet with such a case.

A gentleman, aged 25, applied to me with a chancre upon the upper portion of the glans penis, which he said had occupied that situation for six weeks, and in addition he complained of night pains in the long bones, with sore throat, which, on inspection, presented an erythematous blush. He had soreness about the verge of the anus, and in the external meatus of each ear; a dry, scruffy state of the scalp, with here and there small scabs; and over his arms, trunk, and thighs a papular eruption. I at once prescribed five grains of blue pill to be taken each night, intending to increase the quantity; and as the weather was fine and warm, and the gentleman disinclined for confinement, I allowed him to go at large. On the sixth day I found that diarrhoea had set in, and I stopped the medicine, giving an oil draught, &c. Thirty-six hours later I directed him to resume his pill, but on this occasion with a

quarter of a grain of opium in each pill ; on the fourth day the diarrhoea returned with symptoms of great pain, and distress in the bowels, faintness, a cold, clammy skin, and small, thready pulse; I again administered an oil draught with tinct. opii, and a camphor mixture, with aromatic electuary; and on the following day ordered half a drachm of the mercurial ointment to be rubbed in on the thighs, and a pill of three grains of blue pill with quarter of a grain of opium to be taken each day after dinner, and the patient to keep the house ; a warm bath also was prescribed. During all this period of ten days the syphilitic symptoms continued in nearly the same condition ; the rubbings and pills were continued during three days, when the diarrhoea returned with even greater violence than before, the patient fainting away whilst upon the garde robe, the stools consisting principally of a jelly-like matter tinged with blood. I now determined to discontinue mercury during some time, and substituted the compound decoction of sarsaparilla, a pint in the day, with warm bath on alternate nights, and at the end of three days recommenced the mercurial frictions in the quantity of a scruple three times a day: the frictions were zealously performed by the gentleman himself ; but on the fourth day the bowels were again attacked in every respect in the same manner as when taking the mineral by the mouth, with this difference, that the acute, cutting pains, were felt for several hours previous to purging coming on, whilst in the former instances the diarrhoea took place almost simultaneously with the presence of the pain. I was now compelled to abandon the mercury, and to rely upon the sarsaparilla, as I did not think it justifiable to give the hydriodate of potass in the existing condition of the bowels ; and confess I felt much mortified and annoyed with the state of my patient ; when, on conferring with Sir Augustus West, he stated that he had, in similar cases, derived the most satisfactory results from Ollivier's biscuits: that their constitution was as follows: into a certain quantity of paste or dough was introduced a definite quantity of

muriate of mercury, the dough is then formed into biscuits of a convenient form, and baked, and the mode of administering them was by giving the patient one to eat each day, increasing the number every three or four days till the effects desired to be produced had taken place, and that he had been thus successful in affecting the mouth gently and with certainty in cases where the bowels were intolerant of the mineral in all other forms; under the circumstances I determined to try the effect of the biscuits: and without delaying the Association with a detail of the various days on which I increased the number of biscuits consumed, I may state in a general way, that my patient, took during forty-five days 264 biscuits, during which time the bowels never once became in the least affected. The mouth became sore at the end of twenty days, and the effect of the medicine was afterwards kept up with ease and satisfaction till all symptoms of a syphilitic nature had entirely disappeared; I may add that the decoct. sarsæ. comp. was continued almost without intermission during the whole period, but except during the latter portion of the course the patient was not subjected to confinement.

Remarks.—It is a fact familiar to the members of the Association that mercury may often be successfully introduced into the system by the mouth, even in cases where the bowels have evinced very great delicacy, by taking the precaution of giving it after meals instead of upon an empty stomach; and different reasons may be assigned for the factitious tolerance thus produced; and no doubt it was the observation of the fact which led Ollivier to combine mercury with flour of wheat. I regret not to have been able to procure for the Association the exact proportions which he observes in forming his biscuits, but it will be obvious to the Association that the muriate must undergo considerable modification during the process of baking; probably it is reduced to the condition of a protoxide.

The fact of the bowels being affected by mercury introduced

by the skin, though not of frequent occurrence, I had long been familiar with; and in a very remarkable case which came under my care in Dublin some years back, in which the ointment of protoxide of mercury of the celebrated Mr. Donovan was resorted to, when mercury by the mouth was, from the irritability of the bowels, abandoned, and which that gentleman kindly superintended himself in its preparation, in the laboratory of Mr. Dobbyn in D'Olier-street; in the case referred to, the ointment constantly and uniformly affected the bowels, and on one occasion, where its use had been intermitted for two days, its renewal was followed in the short space of *three hours* with intolerable pains in the bowels, which caused its final abandonment.

SALIVATION FROM THE USE OF HYDRIODATE OF POTASS.

I will now give some particulars of a case in which salivation with swelled gums, and loosened teeth, attended the use of hydriodate of potass.

On the 1st January I was requested by Sir Thomas Sevestre to see a patient of his, a young man, a journeyman cabinetmaker, who a year and a half before had been treated by Mr. Lawrence for venereal, but who had left hospital without been cured; during five weeks Sir Thomas had been giving him Plummer's pill, which from the state of his skin, and other circumstances, had been perfectly indicated; when I saw him he was much reduced in strength and flesh, with a bad cough; he suffered from pains in the shins, and scapulæ, with sore throat, some eruption of a copper colour upon his arms and shoulders; and complained of considerable tenderness, and even pain, in the frontal sinus, and bones of the nose; from which, crusts and dark-coloured discharges, without, however, any remarkable fetor, had latterly taken place. As the weather was cold, and the pulmonary symptoms distressing, I advised attention in the first instance to these, and in conjunction the use of sarsaparilla; and in a few days to commence the use of the hydriodate of potass, as his circumstances did not enable him to use mercury with

the necessary caution. I did not see him again for upwards of three weeks, when I found that he had been taking the hydriodate as directed, in conjunction with sarsaparilla, the latter in powder; the dose of the former had been ten grains a day in solution, afterwards increased to fifteen grains; his cough had nearly left him, his strength and flesh were improved in a marked manner; he complained less of the tenderness in the frontal sinuses; and the dark discharge and crusts had ceased to come down; he slept well, and his appetite was much improved; taking beef and porter daily; but what was most remarkable was, that he was salivating freely, and his front teeth were all loose, as if he had been undergoing a course of mercury, with this difference, that no fetor of the breath was perceptible. I questioned him particularly as to his having taken any other medicine than those recommended, and he solemnly declared he had not. The subsequent treatment, or progress of the case, which has been satisfactory, I will not trouble the Association with.

Remarks.—In the foregoing case we have an instance of the powerful effect which the particular preparation of iodine used possesses upon the system of salivary glands, combined with its acknowledged effects upon the absorbents. The effect which it has been now long known to possess as an antisyphilitic may perhaps receive some light from its observed power over the salivary glands; or at all events, as the same effects have been long remarked as accompanying the beneficial action of mercury in similar ailments, it will show that a greater analogy than was supposed exists between the two agents, and will also bring into question the antidotal properties which some German observers have been inclined to attribute to iodine with relation to mercury.

POWDER OF SARSAPARILLA.

I have mentioned in the foregoing case that sarsaparilla had been given in *powder*; I have long been engaged in observing

the effects of different preparations of sarsaparilla, and I am persuaded that of all the forms in which it can be given, that of powder is in most instances the most valuable. The advantages which it possesses, in my opinion, may be stated as follows : viz. 1, we can make use of it in many conditions of the stomach where a large quantity of fluid would prove inconvenient or injurious ; 2, it may be taken in more certain and definite quantities ; 3, its effects are, as far as I have observed, more durable. Of course certain conditions of the skin will occur, where the use of the domestic decoction will be more serviceable, especially if it be taken warm ; and in a slimy or foul condition of the primæ viæ the infusion in lime water (recommended by Dr. O'Beirne of Dublin, not as made in the Pharmacopœia) will present special advantages. All forms of extract, whether fluid or otherwise, I have remarked to be so uncertain in their effects, (and that whether made with or without the contact of atmospheric air,) that I have long ceased to prescribe them at all.

MODE OF PREPARATION AND ADMINISTRATION OF THE POWDER.

Different means may be used in preparing the powder of sarsaparilla, and provided they have the effect of excluding the ligneous portion of the root, and retaining the remainder, they may be safely left to the discretion of the compounder. The mode made use of in one establishment where I have superintended its preparation is as follows : a quantity of the roots of sarsaparilla, either split or not, but not cut into short portions, is either subjected to the vapour of steam for a few minutes, or if time admit left in a damp cellar for twenty-four or thirty-six hours, and subsequently introduced for an hour into a stove or oven, moderately heated, which processes have the effect of loosening the connexion between the bark and alburnum and ligneous portion, when the former may be easily stripped off, and powdered finely in the mortar, and the powder may afterwards be taken simply in a spoonful of any bland fluid, or may,

in cases where quinine is indicated, be united with a suitable proportion, and the flavour be covered with a little oil of cinnamon—or the powder either simply, or combined with S. of quinine, or in gouty habits, with capsicum or ginger, may be made into pills, and administered in the proportion of from two to four scruples daily.

CRITERION FOR SYPHILIS.

An interesting inquiry, having for its object the establishment of a sure criterion for syphilis, is now going on in Paris: Monsieur Ricord at the Hopital des Veneriens is the author of it: as he means soon to publish his opinions, I think it will be sufficient if I first touch upon the subject, as any extended notice of it would have the effect of bringing forward, in an imperfect manner, a doctrine, which the author alone is competent to place before the public in all its extent.

All practitioners who have to treat venereal disorders, have to deplore the uncertainty in which they are frequently placed with respect to the real nature of sores upon the genitals; and there can I think exist little doubt, but that many sores not of a syphilitic nature have been treated as such: when we read the numerous statements, principally from army surgeons, of the large number of cases which had recovered without the use of mercury, and in which secondary or constitutional symptoms had not supervened, we may I think fairly presume, that the greater proportion of them were not of a specific character. Monsieur Ricord, who, more than most other practitioners, from his greater opportunities, had felt the uncertainty in which he was often placed, when desirous of forming a correct diagnosis, has at length, he conceives, hit upon an expedient, by which all uncertainty may for the future be avoided; it is as follows. In all cases which present themselves with sores upon the genitals, he practises inoculation from the sore or sores upon the same subject, selecting the inside of the thigh as the most convenient place; and he states,

that in case the sore be of a specific nature, that at the end of three days, as a medium, a sore having all the characters of the original one, from which the inoculation had been made, will present itself; should, however, no such sore declare itself, then he says, we may rest assured that the nature of the sore upon the genitals is not specific; Monsieur Ricord has prepared beautiful drawings, which he owes to the skill of Mr. Acton, a most promising English surgeon, which very well illustrate his views; Monsieur Ricord also is in the habit of inoculating from the discharge of gonorrhœa, as he is of opinion, that where it is more than the product of simple irritation, it is caused by syphilitic ulcers in the urethra; and his cases and dissections would appear to warrant him in the opinion.

Remarks.—The best practitioners amongst the French, including Monsieur Ricord, are now generally persuaded that the cure of syphilis can be effected by mercury alone; and though they make use of other adjuvants, they rely more upon it considerably than formerly; and I may add that few books have been received or read with more interest than Mr. Colles's work upon the use of mercury.

In a future communication I will lay before the Association the present condition of vaccination in France.

ART. XXII.—*Case of very long-continued Epilepsy without any appreciable Lesion of the Brain or spinal Marrow.*

By ROBERT J. GRAVES, M.D.

[Read at a Meeting of the Pathological Society.]

MR. A. B., the subject of the following case, was visited during his long illness by a great many medical men; among the rest by Mr. Colles, Sir P. Crampton, Mr. Smyly, Mr. Cathcart Lees, and myself. He died on the 27th December, 1839, aged 30 years.

He had been a very fine, robust, and intelligent boy, until he was nine years old, when he unfortunately got possession of five or six hard, unripe pears, and devoured them greedily ; in a few hours he became thirsty, and drank a large quantity of buttermilk ; in the course of the evening he fell into a state of insensibility, during which he was convulsed ; a physician of great experience and judgment from Kilkenny was called in, who opened the temporal artery immediately on seeing the patient, and employed the usual means resorted to on such occasions ; notwithstanding this, the insensibility continued, and in about seven hours it was observed that a hard tumour could be felt distinctly in the epigastric region. This induced the suspicion of the presence of some undigested substance, and a strong purgative enema was therefore administered ; its effect was most satisfactory, for after the discharge of some copious stools the tumour subsided and the boy recovered his senses. The injury inflicted on the cerebral system by this violent shock manifested itself soon after in the recurrence of the fit, and from that time forth he was subject to epileptic attacks. They annually became more frequent and more severe, but the vigour of his intellect was not impaired until after the disease had continued six years, when his mental faculties displayed a manifest dulness, and in the course of a few years more he gradually lapsed into idiotcy, with however occasional gleams of reason, particularly on subjects connected with religion.

He now remained entirely in the house, and for many years had several epileptic fits daily ; the convulsive stage did not usually last more than three or four minutes, but the coma often continued nearly an hour. The disorder generally exhibited a manifestly increased severity twice a year, when the fits would return about ten times daily, and with more than ordinary violence ; after such a paroxysm had lasted about a week it invariably terminated in outrageous madness, the appearance of which was a sure sign that the paroxysm, so far as regarded the fits, was over ; this madness was of the most

violent and noisy description, and required restraint ; when it had subsided, as it usually did in about three days, he relapsed into his ordinary state with a few and comparatively slight fits daily.

Such was the course of the disease for sixteen years, during which he was most tenderly and assiduously nursed. I ought to have mentioned that a sudden and copious bleeding from the nose often took place when a fit came on; the breathing was invariably violent, irregular, and heaving, for eight or ten minutes after the convulsions had ceased, but then gradually became tranquil, and so continued for the remainder of the comatose stage. During the last five years of this gentleman's life the fits became gradually less violent, but never ceased ; for several years before his death he remained free from the attacks of madness.

In 1833, he became subject to diarrhœa, which recurred frequently, was difficult to stop, and seemed to have induced a most depraved appetite ; in fact at certain times he would swallow every thing he could lay hold of, paper, coals, cork, lead, glass, (after due mastication,) boxes of family pills, straw, bits of books, &c. &c., from none of which did he seem to sustain any permanent injury. These fits of depraved appetite used to come on at irregular intervals ; about 1833, he began to fall away in flesh, and for the last few years was pale, haggard, and emaciated. His sleep was, however, sound, and his appetite usually normal. About two months ago the bowel complaint returned with more than its usual violence, and soon weakened him so much, that for the first time from the commencement of his illness, he was confined to bed, and every thing failed to check the diarrhœa, which finally proved fatal, exhibiting during its progress the usual symptoms of chronic inflammation succeeded by ulceration of the mucous membrane of the intestines. While the diarrhœa was on him, and indeed all through his illness, (except perhaps during the convulsions,) *his pulse was perfectly natural, slow, and soft*, and so continued to within

two days of his decease. The respiration (with the exception formerly noted) was always perfectly natural; never the least short or hurried, and he never had a cough until two nights before he died, when he had a violent fit of coughing which lasted a quarter of an hour, and was apparently stopped by a dose of hartshorn in water; the same happened on the following night. He was never observed on any occasion to expectorate, and never had a vestige of wheezing in his chest, in fact he was to all appearance so free from the least suspicion of pectoral complaint, that neither I nor any one else had examined his chest for many years. It is true that ever since the first epileptic seizure he frequently complained of what he termed pain in his heart, and nineteen years ago he was blistered for it by Doctor Ryan of Kilkenny. This pain referred invariably to the left side, used often to go away for considerable intervals, and was consequently believed to arise from a straining produced by the violence of the convulsions; during the last year of his life this pain was very constantly complained of. About three years ago I saw him for jaundice, which lasted about three weeks, and disappeared without medicine; I could not, at the time, make out the cause of the jaundice; he had no pain, no fever, no hepatitis.

The preceding history of my patient's case, is imperfect, but as far as it goes its accuracy may be relied on. I am particularly anxious to impress this on the minds of my audience, before I relate the result of the *post mortem* examination, which was conducted under the most favourable circumstances, and at the express wish of the family of the deceased, by my friends and former pupils, so distinguished for zeal and ability, Dr. Cathcart Lees, and Mr. Quinan, in the presence of myself and Mr. Smyly: we had the advantage of a well aired and admirably lighted room, and during the dissection the morning sun shone brightly on each organ in succession as we examined it; I mention these facts, lest any one should hereafter attempt to explain away the extraordinary discrepancy which this case

exhibited between the symptoms observed during life, and the morbid appearances discovered after death; the dissection was slowly and carefully conducted, and occupied five hours.

The following account will prove, that except ulceration of the bowels, we found nothing we expected, and many things totally unexpected.

Post Mortem Examination of Mr. A. B. twenty-four Hours after Death.—Body emaciated to an extreme degree: the scalp; cranium, dura mater, arachnoid, pia mater, together with the cortical and medullary substance of both cerebrum and cerebellum, all perfectly healthy; a very small quantity of transparent serum was found in the ventricles; there was no notable subarachnoid effusion.* The spinal marrow and its investments were quite normal.

The *pleura pulmonalis* of the right side was every where intimately adherent to the ribs; *the right lung itself was rendered quite solid by tubercles*, which occupied its whole structure, and presented themselves in every stage of development, but no tubercular cavities could be detected; many crude tubercles were scattered through the otherwise healthy tissue of the lung.

The mucous membrane of the lower third of the ileum, of the cæcum, and colon was thickened, highly vascular, and extensively ulcerated. The liver healthy, gall bladder thickened, not larger than a *walnut*, and entirely filled with a gall stone.

This case is in many respects worthy of notice; in the first place we have here an example of a very violent form of epilepsy lasting for twenty-one years, giving rise to fatuity, and yet the most minute examination failed to detect the least trace of organic lesion in the cerebro-spinal system. That so for-

* In the short report of this case given in the last number of this Journal, subarachnoid effusion was erroneously stated to have been observed.

midable an affection of the brain could continue for so many years, producing a daily recurrence of convulsions, a frequent return of violent mania, and a thorough dilapidation of the intellect,—that such an affection could continue, without the occurrence of any observable changes of structure, is truly surprising, and militates strongly against the doctrine of many modern pathologists, who seek to explain every derangement of cerebral function by the lesions found on dissection. I have long ago stated in my published lectures, my agreement in opinion with those who maintain that epilepsy, mania, insanity, and fatuity, *may* arise without being caused by appreciable changes of structure in the brain or elsewhere; in support of these views, I brought forward the remarkable case of a gentleman, subject to frequent attacks of falling sickness, for nearly thirty-years, and who was quite free from the disease during the last twenty-five years of his life. But if the case above related is well calculated to moderate our hopes of being always able to find lesions corresponding to symptoms, it is more strikingly available in teaching us that most extensive lesions may exist, without giving rise to a single notable symptom, for, during my patient's life neither acceleration of the pulse, cough, nor derangement of the respiration ever existed, and he never expectorated, and yet one of his lungs was consolidated by tubercles.

Without detracting from the true value of morbid anatomy, these facts (with many others already published by various authors) prove that the attempt to connect symptoms with diseased alterations of structure is attended with many difficulties, and is often impracticable.

ART. XXIII.—*On the Position of the Placenta or Afterbirth in the Womb, during certain Stages of Gestation, as also on the Expansion of the latter Organ therein, and of its subsequent Contractions in the Process of Parturition.* By HUGH CARMICHAEL, A.M., Member of the Royal College of Surgeons in Ireland, and one of the Surgeons of the Coombe Lying-in Hospital.

HAD I been aware that my unfortunate placing of the placenta or afterbirth in the womb, would have been a source of such annoyance to any person connected with the obstetric branch of surgical knowledge, I should have quietly left the mass where I found it at the fundus or superior part of the organ, and not have insisted, in these times of reform, on an alteration of its position to the lower and posterior part thereof in the vicinity of its mouth or outlet.

Having embarked, however, in support of this new doctrine, and advocated its cause on grounds which appear to me feasible, I believe too much so for some, I confess I am unwilling to abandon my opinion, unless it be from the pressure of substantial and rational arguments; and as nothing has as yet in that way appeared, which in my mind shakes what I have put forward upon the subject, although much angry matter has been certainly written against me for so doing, I must still maintain, however at variance it may be with the wishes of others, whose equanimity I regret it evidently so much disturbs, what I have before expressed—namely, that the received opinion upon the subject, which maintains the placenta on its formation to be attached at or near the fundus of the womb, and to continue in that position throughout pregnancy *with occasional exceptions*, though it be correct in the first part of it, viz. its attachment at its first formation, nevertheless is wrong as to the other, the continuation in that locality; there being, as I stated in my first

paper, strong grounds to question the validity of this latter supposition.*

My present excuse for again obtruding on public attention, upon this already fully discussed subject, is for the purpose of shewing the untenableness of some objections that have been lately raised against it, and which appeared in the number of this Journal for March last, in the shape of a second review; I have before replied to former objections advanced in a previous number of it from the same quarter, and unfortunately so fully, that it appears to have excited a considerable degree of exasperation against me; and I think now I shall be able also to prove these additional arguments to be equally inapplicable to the matter as those already set aside. Like them, they consist partly in persisting in the misrepresentation of passages of mine, which I have already fully shewn in my last paper admitted of no such construction, as that put upon them by the first review; insisting that I have said what has been stated in it, and that the objections, based upon such explanations of my words, are perfectly justifiable; while others go to controvert the grounds upon which I rested my line of argument, and are attempted to be sustained by abstracts from the writings of those, who have heretofore treated upon these matters, but which I think will be found in no way to support the reasoning for which they are brought forward.

This second review commences by giving me *the lie*; somewhat covertly, but still giving *the lie*.

It begins by informing us that its writer is an unequivocal professional man and gentleman, and the word of honour is solemnly pledged in the declaration of it. I was glad of this, because where *the pledge* was taken, we might now-a-days expect *temper-ance*. However, it would seem that lest any doubt might exist respecting it, and in order to

* Dublin Medical Journal, vol. xiv. p. 452.

insure belief, its truth is at once vouched for, by cautiously bandying *the lie*.

This gentleman further informs us, that it is not the first time *the lie* has been so given in this controversy, which is certainly a fact—indeed it would seem to be a favourite phrase, and probably often resorted to ; with such credentials, therefore, before us, we shall not dispute the character laid claim to in this paragraph, by any individual who could encourage or sanction such an elegant style of defence?

I shall be very concise and moderate in my notice of this gentleman's phrase. Of all things I shall avoid personalities ; they are low and coarse ; the resource only of the intemperate and the vulgar ; or sometimes resorted to by inconsiderate aspirants, who, having rushed into a subject wherein it is found insufficiency alone has been exhibited ; hope, by such little tact, to turn the disputation into personal offensiveness, and thus escape from a further display of an already too much exposed ignorance. I shall therefore dismiss the matter, lest by any chance they might in some shape here intrude ; they should be left altogether to those to whose taste they may be congenial, and who may boast of them as weapons they are in the habit of resorting to when argument or temper fails them.

The excuse for again calling in the seasonable aid of this language in the second review is, that, in my last paper, I used words and made charges against the Master and officers of the Britain-street Hospital, calculated to convey impressions injurious to them ; it is not at all in the quarrel of the gentleman himself, but as the champion of these individuals.

Now, what are the phrases injurious to them, and conveying the idea that I attributed to them a participation in the framing of these reviews, which is another charge? Why, in the first instance, it appears, I did not choose to print one person's name, or indeed notice it at all in my last paper ; and next, I used the words, "a review from the Britain-street Hospital,"

and also the words, "the Britain-street Hospital critics:" this is the amount of the charges.

With respect to the first of them, then, I have only to say, that if I be so dull or insensible to my own fame, as not to couple the name of any person with whatever little tract I might obtrude on public attention; the great loss must be all my own; and I do not think I am to be reprimanded for it, but particularly in the way adopted, and the more so by the person who is so angry with me for not printing his name. Next, as to the charges respecting the Britain-street Hospital; I should like to know, where *did* the first review come from; yes, and the second one too, if not from that hospital? Did not the *first* review, in the heading of it, state the writer to be the Clinical Clerk of the Britain-street Hospital, and also the Secretary to the Obstetric Society belonging to that Hospital? Did it not declare in the very commencement of it, that on the appearance of my paper, the vast field that hospital afforded, was availed of for the purpose of testing the views I then put forward? Were not all the cases, with the exception of one, cases from the Britain-street Hospital? Is not the celebrated table of statistics, that appears, in this last review, got up at the Britain-street Hospital? And lastly, though this grave charge is laid against me, of offering such offence to that hospital and its officers, as that of attributing these reviews to it, as an excuse for the neat specimen of breeding that called forth these remarks; was not the philippic in the Medical Press, where *the lie* was bandied before, absolutely dated from *the Dublin Lying-in Hospital*.

All these facts, with the exception of the statistics, were before me when I wrote my last paper; were they or were they not sufficient to warrant me in concluding the review came from the Britain-street Hospital, particularly the last, which was dated from that hospital; or under the circumstances of the case, even admitting it to be injurious to the character of that hospital to suppose reviews like these came from it; was the state of

the question such as to warrant such a departure from (I shall, warned by the example before me, only call it) the courtesy usual in a matter of this description, or justify the handsome expression *false*, in the manner it was resorted to?

If there be anything necessary to establish the justness of this reasoning on my part, and the conviction on that of the review, that there were every grounds for my so thinking and so expressing myself, it is the clever little alteration which has taken place in the heading of the *last* review; for while in the *first*, the Clinical Clerk of the Dublin Lying-in Hospital and the Secretary to the Obstetric Society of that hospital was coupled with its heading; all these titles are now studiously laid aside in the *second*, and it is brought forward in the plain capacity of coming from an M.D. Why have all these titles been laid aside in the *last* review? the reason is obvious; they, with other matters stated, fixed these papers as coming from that hospital, and warranted my expression in the above particular; and they must be omitted here in order to qualify the disclaimer on the part of it in the very elegant style in which it has been done—the more particularly when it is declared, that some of its officers were altogether ignorant of my paper, and also ignorant of the nature of the criticism brought forward against it in the Obstetric Society; although I believe that *all its officers* were present the night that critique was read in that society; and one of them was so attentive on the occasion, that he absolutely was the person who adjusted a placenta brought forward there by a gentleman for the purpose of elucidating my opinion upon the subject.—I should like to know which of them that person was?

Now with respect to my using the word “critics” instead of “critic,” I shall just shortly call attention to the circumstances of the sixth case, mentioned in the first review, which, by the way, was reserved in that review for the last, the conclusive settler of my theory; but which I think has been quite settled in my last paper, so much so, that although triumphantly reiterated in

the reply against me in the *Medical Press* as *unanswerable*, it has been very wisely let drop in this second review, and nothing more said about it. In this case we are told, that the placental murmur first faintly existed at the fundus, and the observers at the Britain-street Hospital appear to have been quite certain an unanswerable argument against me was just about to get birth in it. The impression with them was, that as labour advanced (if my theory was correct) the murmur must have risen to the fundus; have existed there in full intensity, for a time, and then have descended down to very near the pubis, carrying the fundus throughout with it, and that before the child's head was born; inasmuch as it is then only the souffle ceases; whereas the review positively averred, no such change occurred.* Now who, not was, but were, around this case, *confessedly* for the purpose of criticising my theory by it? why, the reviewer, the Assistant Physician of the Hospital, and a parcel of its pupils; all were engaged watching it with this view, and on the very score of criticism. At least, so the copy of this Journal for July last (page 359) which fell into my hands has it, and which contains the review in question;† need I go farther then, in order to shew, that I was warranted in saying, first "a review from the Britain-street Hospital," and next, "the Britain-street

* See the Number of this Journal for July 1839, p. 359.

† The sad mistake these gentlemen committed, for I *must* speak of them in the plural number, and which led to the great waste of their time over this case, was, their being unaware of a fact I informed them upon in my last paper; namely, that the fundus, in labour, so far from going down to near the pubis, does not descend one inch, until the head of the child is being born, when the placental murmur then usually ceases; with all the feeling which pervades the last review, this piece of information to them has been alluded to, stating it as, "a well known fact which Mr. Carmichael has just discovered." I can only say, if it be "a well known fact," so much the more it shews the little degree of information respecting it, possessed by these critics at the Britain-street Hospital, before I told it to them; and so much the more astray must they appear, watching over this case, for the occurrence of a phenomenon which is now admitted to be totally at variance with a generally known circumstance.

Hospital critics." I cannot see any thing in the expressions, under the above circumstances, which should excite such sensibility upon this point, morbid as that sensibility evidently is, unless that it gave a pretext for reiterating the expression, which appears to be so peculiarly a favourite in this discussion, and particularly when it was to be applied to a quarter, that has pointed out such little mistakes, both practically and physiologically, on the part of papers intended as no less than reviews, and which certainly it would be just as well for their character, as authority, in that respect, that they had not been brought to light.

Having thus, I hope satisfactorily, explained the circumstances connected with the use of the handsome prefatory paragraph, with which the second review commences, I shall now proceed to the consideration of its merits.

Were I to follow the objections contained in it, and answer *seriatim*, such of them as at once admitted of being so, I should be compelled to go through, and reply to every page of it; it is only necessary to read it over, in order to see, by its style, its object, and the feeling with which it is constructed, displeasure and irritation are breathed throughout; and we must expect therefore, like most things of the kind, where feeling predominates so much, that sober discussion with candid and fair investigation, will be the least of its ingredients; I shall confine myself, however, to the most important points connected with my subject, and do it in as concise a manner as possible.

It commences, as might be expected, with an endeavour to exonerate the first review from the discredit of the misrepresentations it contained, and upon which it was based; but in its solicitude to effect this, it only gets deeper into mire it labours to be freed from.

In order to this, it states at the outset, that in my reply to the first review, I rested my defence solely on *words*, not on their *meaning*; that what that review attributed to me as the *meaning* of certain passages in my paper, I did not deny; only

said, such *words* were not distinctly *written* by me ; that I did not dare to dispute it.

First then as to this, I have to remark, that so very palpable were the misrepresentations contained in that review, it would be only necessary to state them and the passages they purported to interpret, in order to point out their unfairness ; and in support thereof, I beg to refer to my last paper pages 219, 20, 21, 22, Dublin Medical Journal, November, 1839, where the original passages, and those distorting them, are set out, and placed together in juxta position ; but independent of this, this second review, so sensitive in the cause of truth that it does not hesitate in the quarrel of others, to tell me my statements respecting *them* are *false*, is certainly very oblivious in making this assertion about me ; as I think I can shew.

The chief thing the first review laboured to fix upon me, and which also the second one is now equally anxious to establish, and says is no misrepresentation, was, that I asserted, if the placenta were affixed to *any other part* of the womb but the lower and back part, (as the anterior wall,) that detachment and *hæmorrhage* would occur during labour, and that, *before the birth of the child* ; all its cases went to this ; indeed we are now informed by the second review, that it only intended such a meaning could be taken out of my words ; even so, let us see whether I did not argue this, not as to the *words* but *meaning*.

First, however, I must quote the passage from the first review charging me with this statement ; “ but laying aside theory,” it says, “ let us inquire is Mr. Carmichael correct in his position, that the placenta in natural pregnancies is *always* placed low down on the posterior wall, and that its being implanted in *any other situation*, must, *ex necessitate*, during the growth of the uterus, or at least during its contractions to expel the fœtus, cause a *premature detachment* and *consequent hæmorrhage*. These propositions I shall consider together, and I submit that if I succeed in bringing forward cases in which the placenta was *otherwise* affixed, and yet *no hæmorrhage* oc-

curring *before the birth of the child*, I shall have gone a great way in sapping the foundation of the author's interesting but fallacious theory," &c.* A number of cases were then brought forward where the placenta was on the *anterior* wall, and which ended favourably.

Now, whether I replied to this as to its *words* only, and not against its *meaning*, the following passage in my last paper will point out, and to which the second review was a reply. After showing what moonshine the gentlemen round the sixth case were looking for, from their being unaware of the fact that the fundus does not descend in labour until the head of the child is being born, I thus continue: "How then could detachment with hæmorrhage occur up to the resting of the head upon the perineum, if the superficies of the organ diminish in no remarkable degree? and after that, if detachment did take place, it must be by permanent uterine contraction; and how could hæmorrhage then occur; or how could any person aware of this fact (the well known one) ever dream, much less seriously speak of it (*hæmorrhage*)? Yet this is one of the questions gravely asked in these cases by this review from the Britain-street Hospital, and read before the Obstetric Society."†

I believe this was arguing as to meaning, and very decidedly so too; yes, and probably far beyond what was agreeable, inasmuch as it showed what want of knowledge existed in the wards at Britain-street, of what the review now tells us is "a well known fact." So far then as to detachment and hæmorrhage, if the placenta be on the anterior wall.

Another thing the review charged me with was, that I maintained, extinction of the placental function early in the labour, and ultimately a still birth, must ensue, if the placenta be otherwise affixed (on the anterior wall) than as I placed it;

* Dublin Journal of Medical Science, July, 1839, p. 353.

† Dublin Journal of Medical Science, November, 1839, p. 231.

on the grounds, as it now turns out from the second review, that if the expansions and contractions be greatest on the anterior wall, what I contended for would happen at the fundus, must doubly so there ; without, however, taking into consideration the supposed different nature of the contractions under dispute.

In the Medical Press, however, No. 32, p. 90, I argued against this, and likewise against hæmorrhage as above, and showed there, that the condition of the placenta upon the anterior wall was quite different from it on the fundus, regard being had to the two theories of contraction ; so that what could take place (extinction of the placental function) at the fundus, would be avoided on the anterior wall. I there showed, that if two unequal circular surfaces (the placental and the fundal) were in juxta position ; and if while the smaller of these (the placental) remained fixed, the larger (the fundal) shrunk in and lessened from all points of its circumference to its centre, as is the present doctrine of the fundal contraction ; that the change between these surfaces would then be decidedly effective, and so as to detach each other ; whereas if these surfaces were so circumstanced, that the shrinking in of the larger (now the anterior wall) only took place at one end of it, the other end remaining at rest, the entire of the smaller surface would thereby be moveable on it, the larger, which would not be so in the case of the first state of things ; would rise and fall with the motions of the larger surface, and thus escape from the effects inevitable in its first or fixed condition ; the one, in fact, may be denominated centripetal, the other rectilinear contractions. This was my line of argument in the Press, to show how differently the placenta would be affected by the supposed contractions of the fundus and those I advocated on the anterior wall, and I elucidated it by a diagram. Thus I submit the statement of this truth-loving review, averring that I took up my stand only upon the words, not their meaning, was certainly imbued, very much indeed, with obliviousness.

So far with respect to the two first parts of this explanation of my meaning, viz., hæmorrhage during labour, or extinction of its function when the placenta was any where except where I put it; and now to that which relates to hæmorrhage and detachment of it, *the child fully in the womb*. That I argued against this as to meaning, not words, I can best and most briefly show by my remarks in the Press, No. 32, p. 90, on the second case of the first review.—“ I have only to avow (I there said) that in all the cases, not one had the placenta at the fundus. I shall select the second as a specimen of all the rest,—Bridget Nicholson, a patient in the Britain-street Hospital, whose pelvis was undersized, and, as I suppose, considerably so, inasmuch as she was obliged afterwards to be delivered with instruments, no doubt the crotchet, because three doses of ergot of rye (thirty grains each) were given her, and by its influence, powerful, uninterrupted uterine action was brought on without inducing delivery. The conclusive question, however, is asked; why, when such powerful uterine action was induced by the ergot, was not the placenta (on the anterior wall) *detached with hæmorrhage*? The answer is simple,—simple as possible. Let us recollect that this powerful uterine action was induced by large doses of the ergot in a case of undersized pelvis, and the answer is, in order to detach a placenta in that situation, by uterine contraction, the uterus must diminish in surface to a certain extent; but when the pelvis was so undersized, that powerful uninterrupted contraction, induced by the ergot, could not overcome it, the presence of the child in the womb mechanically prevented the necessary superficial diminution for that purpose. In my mind, the only chance of bleeding in such a case would be, from rupture of the womb, in consequence of powerful, unavailing uterine action being induced over a misshapen pelvis.”

I believe these remarks sufficiently shew, that I not only denied the passages attributed to me, to be mine, but also argued on the unfairness of giving them, by way of explanation of those of mine they were intended for. I could give several others,

in support of this assertion, and which are to be found throughout my defence, but it would be only unnecessarily encroaching on the pages of this Journal ; these are sufficient to correct this little mistake, on the part of the second review ; but I cannot help, however, remarking, that it is certainly rather strange, these reviews, so sensitive in the cause of truth, as to be so frequently ready with the word "*false*," should absolutely start with an assertion of this kind in the face of the above already printed documents. Such random, wildness of argument, is, as I observed, only plunging deeper into the misrepresentation it was so anxiously endeavouring to escape out of.

The most extraordinary part of the above passage from the review is, the looking, at labour, for detachment of the placenta from the anterior wall of the womb, *while the child fully occupied it* ; nevertheless so decidedly impressed with that opinion does it appear to have been, before entering upon this discussion, that it had recourse in its answer in the Medical Press, No. 32, p. 123, to a piece of sarcasm, by way of ridiculing me for thinking such a thing was not quite usual, and rational, and sound doctrine. It there observes : " He (Mr. Carmichael) adds, that a nine months' child is no trifle in a womb, and always manifests the greatest unwillingness *whilst here*, to allow the lateral walls of its chamber, anterior or otherwise, to lessen their superficial extent sufficiently for that purpose, [to admit of the detachment of the placenta,] or give way before the contractile tendency. I admit—I freely admit, that a full grown child, particularly in Ireland, is no trifle in a womb ; but though I have heard of 'mares' nests' and other curious phenomena, *I never till now 'knew'* that a nine months' child owed to its shoulder or its bottom, the maintenance of its vitality *in utero*. Pray at what period of gestation is it gifted with such precociousness?" This certainly is very strange doctrine coming from—a REVIEW !!!

The above, I believe, is quite sufficient, as to the quantum of credit to be attached to the opening argument of the second review ; and now to the next succeeding one.

It next goes on to a matter upon which it is quite satisfied, sure of defeating me, and introduces it to notice, with the expression, that it is one which Mr. Carmichael will be *constrained* to admit :*—confident language this. Now what would the review think, if the *constraint* should turn out to be all on the other side, and that I should force it, on those future occasions with which I am threatened, to observe the same very prudent forbearance with regard to alluding to, or even hinting at this matter, which is now so sensibly done, respecting the formerly destructive sixth case—drop it and say no more about it ?

This point on which I am so decidedly to be vanquished, is nothing less than to prove, and on my own very shewing, that even if the fundus be eleven inches, in its cross measurement, and the placenta but six, the latter will outgrow the former, and thereby how wrong I was in saying, the fundus would outgrow it.

Before, however, I proceed with its consideration, I must first trespass a little on attention, in order to shew the manner this point was handled in the first review, and the manœuvre with which it was tried to be settled against me ; and I think the admission made respecting it, in the second review, when explained, will tend very much towards pointing out the object of these papers, and the quantum of dependance that is to be placed generally upon them.

It is quite obvious, that when I spoke of the comparative growth of the placenta and fundus, in my original paper, I meant their superficial growths, as a reference to my statement will shew : “ now if the placenta be situated, where such expansion is going on, (the fundus,) a change of *surface* must to a greater or less extent be constantly occurring between the two. The effect is, as the uterus increases in *superficies*, the connexion between it and the placenta must be disturbed, and probably to some extent torn, &c.†

* Dublin Journal of Medical Science for March, 1840, p. 6.

† Dublin Journal of Medical Science, p. 453, January, 1839.

The first review, however, undertook to disprove this assertion of mine, and entered into a calculation to shew, that so far from my statement being the fact, the placenta would outgrow the fundus.

In order to this it stated, that the fundus increased *but five inches*; whereas the placenta being admitted to be six, the consequence obviously was, that I was quite wrong in my position; and in support of the five-inch fundal measurement, Burns was quoted as an authority, though I could find nothing of the kind in that work, at least at the page (49) to which a reference was made.

In my last paper I of course noticed this misstatement as to Burns, and, as I thought, error in the *superficial* increase of the fundus, and shewed that instead of five inches, its measurement across is eleven. What does it turn out then that the first review had recourse to, in order to put down my statement as to these comparative measurements, and which in this second one it is *constrained* to admit? why that the review, in its argument upon it, endeavoured to slip in or substitute the *height* of the fundus (five inches) for its *superficial* measurement (eleven inches) in the calculation, and thus at all events prove Mr. Carmichael was (*ought to be*?) wrong. This confession, so highly creditable to its candour, comes out in the second review, p. 6: "This calculation (that of the first review) Mr. Carmichael objects to, and confounding what I have said of the increased *altitude* of this part, (the fundus,) with its increase in *breadth*, states the proportions, &c."

Now I would beg to ask, how is such a manœuvre as this to be designated? Is this the candid, the *veracious* review; so sensitive in the cause of truth, as to call forth from it the term "false" so repeatedly and so handsomely in these its criticisms? Reviews "that would be so much pained if any gentleman would suppose them guilty of intentionally misrepresenting him; that declare themselves *utterly incapable* of distorting the sentiments of any writer to cast ridicule and reproach on him; that would not *willingly* seek out a *devious*

path to *strain* the author's meaning, but follow the *straight* and open course which even the *most cautious* would probably pursue.* Is this fine character, I say, the second review gives us of itself and its consort, thus sustained by an endeavour to substitute the *depth* of a part for its *superficial* measurement, in comparing that part with the superficial measurement of another, and where the superficial measurement of both was absolutely stated by the author it volunteers to criticize and purports to hold up to ridicule? This certainly is rather at variance with what might be expected from such a quarter; such highness of mind, of sentiment; and looks *rather* like a desire for victory on the old principle, that *all is fair in war*, than candid investigation of what it undertook so *cautiously* and *unwittingly to review*; an attempt to accommodate matters, not to meet the justice of the case, but to answer an object to be attained.

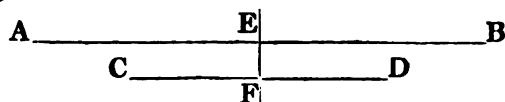
Let us now, however, consider the new grounds taken up by the second review to disprove my original statement in this particular; where I am to be *constrained* into an admission; and I am very much disposed to think, we shall silence it as effectually upon this *constraining* calculation; shew it entitled to just as much credit as in either the celebrated sixth case; the statement that I disputed about words not meaning; or its late *compound-alto-superficial-fundal-measurement attempt*.

The review now admits the measurement across the fundus to be eleven inches, and goes into a comparative calculation between the parts upon this admission. It states I committed a great mistake in not taking into consideration the extent of the fundus between the tubes before the placenta was formed first; this it states to be two inches, therefore the increase of the fundus is as 2 to 11, which being reduced to the one-inch calculation (one-half?) is as 1 to 5½; but as the placenta (the two-halves?) is as 1 to 6, the latter is thus *constrained* to

* Second Review, Dublin Journal, March, 1840, pp. 40, 41.

outgrow the former in the proportion that 1 to $5\frac{1}{2}$, is to 1 to 6. This is *mighty* clever indeed!

The calculation here is very ingenious no doubt, and might, to a careless reader, mystify the matter so completely as to set him altogether astray in it. But it happens to be all on one side, and therefore it wont stand; the best way to elucidate both the error and the real state of the case is by a little diagram; we are here supposing the placenta to be at the fundus of the womb, and the expansion to be going on there, not as I contend, but as is contended for in the review, for the review promises to *constrain* me even on my own shewing.



Let A, B, then, represent the surface of the *fully* expanded fundus; C, D that of the *fully* expanded placenta; E, F the centre of each; now A, E, the *half* of the fully expanded fundus, no doubt has increased in a proportion of 1 to $5\frac{1}{2}$, being the *half* of 2 to 11, which A, B represents; but as that A, E, is only applied to so much of the placenta as will be contained under C, F, it should be compared in the calculation only with the latter; and the comparison would then stand thus: 1 to $5\frac{1}{2}$, for the increase of half the fundus; and 1 to 3, for that of half the placenta; or 2 to 11 for the entire of the fundus; and 2 to 6 for the entire of the placenta; or if the review likes, all 6 for the placenta. The truth is, the first review being foiled upon the plan adopted in it on this important part of the subject, now tries another, equally untenable, though not so palpably unfair; this is too serious a matter to be easily given up; and that is, by a little dexterity in figuring, to compare *half* the expansion of the fundus with the *entire* of that of the placenta; this, however, would be, as I have said,

to have the matter all on one side ; I object to it, therefore, as I wish things to be *straight* forward, however this may please. What anxiety these plans evince to crush my paper, or even the consideration or investigation of it !

But let us see how these *surfaces* in truth stand, relatively, with respect to each other, and which has not yet been done. The true way to do so is, to view them in their total superficial measurement, not rectilinearly, as has been heretofore the plan. Let us then take eleven inches as the measurement between the tubes, and say ten for the antero-posterior ; these multiplied into each other give the square superficial measurement, or extent to which the fundus has expanded, viz. 120 square inches ; let the review take from this its two inches both ways, which will give four square inches, and we have then 116 square inches to represent the fully expanded fundus. The placenta being averaged at six inches both ways, gives thirty-six square inches for it, all of which we may give to the review without any drawback ;—thus then we have 116 to represent the fundus, and 36 the placenta. I hope the review is now satisfied with its calculations ; in future it might be prudent to observe the same sensible forbearance as regards them, as it does now about the destructive sixth case—say no more about it.

From this point the review goes on to one, upon which it is as confident of vanquishing me,—at least it argues so,—as it once was on those we have already put at the back of its books ; sixth case, compound calculation, and all : I think, however, we may show it in a different point of view from that which it is now placed in, and may even require another page of that part of its ledger for the registration of it also in.

The point is, that inasmuch as I stated the expansion goes on chiefly on the anterior wall, and to such an extent, that it not only supplies that wall, but also the fundus, and likewise so much of the posterior wall as is above the tubes ; that where such expansion takes place, not only the disturbance which I argue would happen at the fundus, according to the present

doctrine during gestation, must necessarily occur if the placenta be upon it; but also at birth, the *hæmorrhage* the review labours so much to fasten on, and if possible, to convict me of having said, or as it now turns out, implied in my paper. It states the increase of that wall, according to me, cannot be less than seventeen inches, and (p. 7) "the placenta, therefore, *ought* not accordingly to be able to grow there equally with the wall of the womb—let us consider this, however."

In order to it then, we must view the placenta as to how it may be affected in two ways on this expanding anterior wall; first, as to its increase in breadth, and second, in its altitude. With respect to the first then, if we say the anterior wall of the uterus expands laterally, or widens to the extent of ten inches, we may probably be near the mark, if not beyond it; now, the breadth of the unimpregnated womb is supposed to be about two inches; this it has *at least* doubled at the end of the second month, (see first review, p. 352 :) "until the middle of the second month, the vessels do not implant themselves into the decidua to form the placenta. Before this period the uterus has *at least doubled* its original size;" it is therefore four inches before the placenta first forms, (at the second month;) if then it grows to ten inches afterwards, across or laterally, it has expanded laterally but six since the placenta was first formed, and thus the placenta in that direction can be accommodated so as to grow without disturbance, keeping pace exactly with the growth of the womb. So much for the growth in the lateral direction.

But the principal point the review relies on for defeating me on this question is, the expansion of the womb in its *altitudinal* direction, and which being seventeen inches, as it states, according to my view of the matter, must thus render it impossible for a placenta, growing but to six inches, to be free from disturbance there during gestation, and at birth to be uncomplicated with its favourite *hæmorrhage*. The latter part of this we have already despatched, even with the assistance of *the child*

in utero, in a foregoing part of our inquiry ; it is therefore unnecessary to repeat it here, and I think I can very briefly explain how the former also can be avoided, namely, the placenta grow to maturity without disturbance, though on a surface expanding to seventeen inches. Three lines will be sufficient for that purpose. Well ; whatever part of the anterior wall the placenta forms upon, must, as it rises, carry up the placenta along with it, the mass growing upon it as it rises. If, indeed, the placenta were formed at or upon a given point of the anterior wall, and that that point were fixed, the growth expanding from it upwards and downwards to the extent of seventeen inches, eight and a half on each side, then truly might the review defeat me altogether on the matter. It would be just the description of growth I contend against, as that which is supposed to go on at the fundus,—just as absurd, just as irreconcilable to reason ; and one or two cases with the placenta anteriorly, terminating favourably, must be conclusive against me ; but such an expansion is clearly one thing, and its rising only another ; in the former, a manifest absurdity must attach to my doctrine, but in the latter, it is perfectly rational and compatible. No doubt, *occasionally*, the placenta may not be accommodated where this great expansion goes on, though generally it can ; and such an occurrence may and can “ still further support the hint Mr. Carmichael has lately thrown out, that some of the cases of abortion which occur without any assignable cause, at certain periods of gestation, may owe their cause to some such malposition.”*

In fact, all these points were substantially and fully answered before ; they, with others, were not only such an unfair representation either of my statements, or of any meaning that could be put upon them, but involved, as I have said, such inconsistency on the part of those who could seriously adopt them, that they led to the ridiculing of them in the Medical Press,

* Review the second, p. 7.

which I can well conceive to have been so very disagreeable to reviews, whose great obstetric mistakes were there so fully and ludicrously pointed out.

In the argument on these points in the second review, the great difference between radiating expansion and that in a simple rectilinear direction; and centripetal contraction, and that where one part is fixed, the other alone moveable, and which I particularly dwelled upon in my former replies, is very prudently kept out of view; although from the use of the term "rectilinear contractions," in one place, p. 9, the difference was well understood.

During the discussion of this topic, we are informed, "one of the strongest objections the review has to my paper is, that I not only pass over the *possibility* of the placenta being *otherwise* affixed than at the posterior wall, but 'that I positively assert' it is no where else." In my original paper, however, I stated two cases where it was *otherwise affixed*, Denman's and Mr. Porter's; and in my last, which the second review purports to answer, I speak of where it was found, in hour-glass contractions, gritty placentas, retained placentas, and such like; the *hint* also respecting abortions, so convenient in other places as it was thought, is here quite forgotten. When reviews, however, are strongly actuated with the desire of extinguishing a writer, it is extraordinary how very insufficient the memory becomes, notwithstanding high and exalted feeling.

As a proof, however, of my opinion being, that the placenta was *positively no where* to be met but low on the posterior wall, the following passage is quoted from my paper: "In what way can we possibly account for the uterine contractions taking place up to almost the very last act of labour *without the circulation being impeded*, so essential to the life of the child; clearly on the grounds alone, that the part where the placenta is attached, the back of the womb, not only is not submitted to *these* contractions during labour until after the birth of the child, but is likewise by some means prevented, from the effects *which the contractions in*

other parts would have on it, ('compression,') without some such means being in question."

If the passage, however, *immediately* preceding this and in connexion with it, be read in my paper, it will give it a meaning different from that which it bears according to this second review, (p. 473.) It will be seen by it, that when I so spoke, with reference to *the contractions in other parts*, it was with reference to those supposed to exist at the fundus, and to the opinion of certain French authors as to the placental function being, in consequence of them, extinguished (the compression of the above passage) long before the birth of the child. That immediately preceding passage is as follows:—"From these facts, then, I conclude, that the statements of these authors (the French) are erroneous, and consequently that it is incorrect to imagine the contractions of the womb go on, *as at present supposed*, (the fundal,) upon the authority of which these statements (about compression) are made." Garbled and partial abstracts are within the reach of all. "Such statements, however, are unfair, and bad indeed must be the cause that requires their aid."

From this the review proceeds, with an endeavour to escape from the sad want of obstetric information evinced in the first one, by looking for detachment and hæmorrhage from a placenta on the anterior wall, *the child still fully in the womb*; and with which I charged it in my replies, and particularly that in the Medical Press. The passage quoted, however, above, from that Journal, in answer to my first remonstrance on this point, is too explanatory upon that part of its doctrine to admit of any misunderstanding about it; and shows too clearly how fully impressed with the supposed truth of it the reviewer then was, to be got rid of now in any other way except by a candid declaration, that "the well known fact" respecting it was altogether unknown *then* in the quarter from whence the review came. The dilemma—is too difficult to be escaped from by what is here resorted to. The second review indeed states, (p. 9,)

that *I* asserted in my last paper, *I* never meant hæmorrhage while the child was *fully in utero*. If *I* did not mean it, I know *who did*; and detachment of the placenta too; and who *I* told was quite astray in so doing; yes, and who took a long time to think of it before the glaring absurdity was discovered. By way of fastening this mistake in some way also on me—getting company in its errors—the passage from my paper is quoted where *I* spoke of hæmorrhage, “when the placenta was high on the posterior wall;” but though *I* spoke then of *early contractions*, they were not while the child was in the womb, because (again the review *forgets*) the contractions are all then *on the anterior wall*. The mistake, when discovered, must certainly have been most vexatious, and unquestionably nothing should be left untried to shift it.

Here ends the defence of the first review; the endeavour to exonerate it from its misrepresentations; with what success, however, general opinion will decide; and now the second review goes to prove, that the two propositions upon which *I* base my theory of expansion and contraction of the womb are both wrong.

The readers of this Journal will recollect the first of these propositions to be; that the placenta, on its formation, is affixed at the fundus *or somewhere near it*; and the other, that at the close of pregnancy, it is low down on the posterior wall. The remark in the *second* review as regards the first is as follows, page 11.

“Now with respect to its (the placenta’s) early attachment, *I* know not upon what he (Mr. Carmichael) founds his opinion, but that it is *erroneous*, reference to plates and preparations will fully prove.” Thus this review announces the doctrine; that the placenta is not first formed at, or near the fundus, in the vicinity of the uterine opening of the fallopian tube; that this opening is when the placenta is formed on the body of the womb, not at or near the fundus.

First, however, let us understand what *I have* said about its

early attachment, and then we shall refer to plates, and authority also. In order to this, then, I shall quote from the first review, its report of what I have said on this point, and it will serve the double purpose of both stating it, and likewise of contrasting its *then* opinion respecting it, with its angry, late declaration on the matter in the second review as just mentioned.

“ Mr. Carmichael having proved it essential to the life of the child, that an uninterrupted communication be maintained between it and the placenta; details the opinions *generally entertained* on the subject of his investigation; namely, that the placenta is, *on its formation*, attached to or near the fundus with occasional deviations.”*

Here is a statement of what I said, and also an admission that it is *the opinion generally entertained*, yet now the review is at a loss to know what in the name of wonder induced me to make such a statement; that it is altogether *erroneous*. To be sure there is a little displeasure exhibited lately; however it is only necessary for me now to shew, where in the neighbourhood of the fundus I fixed its first formation, and which the following passages, among others, from my paper will.

“ When the ovum descends into the uterus from its ovarium, it is shortly after implanted thereon, as already mentioned; and it is of course obvious, that this attaching of it must take place *nearer* to that Fallopian tube, which it traversed, than the other;”† again, “ I have stated that on its formation, the placenta is affixed at the fundus, or close to it; but it may probably be said, that it is not exactly so placed; still it must be very nearly so, near the fallopian tube.” p. 470.

This is, I believe, sufficient to mark, where I assigned its first place to be, and also that the first review (but before

* Dublin Journal of Medical Science, July 1839, p. 344.

† Dublin Journal of Medical Science, January, 1839, p. 461.

the feeling arose, which might be expected from the exposure of certain little mistakes upon obstetric subjects,) absolutely declared, *I was right in so doing* ; now then to the plates, &c.

We are referred to Velpeau; we are not, however, told whereabouts in his work "the many" representations spoken of are to be seen, which controverts my first proposition; I have only to say, I have looked carefully for them, but could find none in his "*Ovologie Humain*:" I beg, however, to refer to that work myself, in proof of my assertion, and to particularize the plates; that is, as to the placenta being first *near* the fundus; plate 2, figures 3, 4, 7; plate 3, figures 3, 4, the position of the heads here, in these last views, shews the ova to be reversed in them; plate 8, figure 7; plate 11, figure 2; plate 14, plate 15. Again I refer to Cloquet's "*Anatomie de l'Homme et l'Figures*," plate 296, figure 1, foetus nine weeks; figure 2, ditto; figure 3, seven weeks: these plates are the same as in Soemmerring.

Now let us hear the testimony of Velpeau as to its formation: "*voici ce qui me semble exister; apres avoir glissé entre la surface interne de l'utérus et la caduque, après s'être fixée sur l'organe qui doit la renfermer jusqu'à l'accouchement, la vésicule villeuse reste en contact avec lui par une de ses moitiés, tandis que l'autre déprime la membrane anhiste; on conçoit ainsi un disque de l'ovule, qui n'est pas séparé des surfaces vivantes par une couche couenneuse, et c'est là que le placenta se développe.*"*

Here then we have the authority of Velpeau upon the subject, who states, that when the ovum descends into the womb, one-half of it is applied to its (the womb's) surface, while the other depresses the reflexa, and that *the former* attaches to the womb, and there forms the placenta: where, however, is that surface? near the fallopian tube.

* *Ovologie Humain*, pp. 68, 69.

Let us now see what Burns says: "The placenta *may* be formed at any part of the uterus, but in *general* it is found *near* the fundus:" again, Meigs: "*For the most part* the ovule attaches itself to the naked surface of the womb *in the vicinity of the orifices of the fallopian tube through which it entered*, but it certainly does, in a good many instances, move *to the fundus*, or to the anterior or posterior surface of the organ, or it *may* even fall downwards into the vicinity of the upper opening of the cervix, and attach itself there."

These two last passages are absolutely quoted in the review as against me; why, I cannot say, inasmuch as they most decidedly make for my doctrine; the amount of their evidence is, that the place of attachment for the placenta is the fundus or its vicinity, and that exceptions (*occasional*) to this rule, occur sometimes anteriorly, posteriorly, or at the cervix. Will the review say the attachment at the cervix is common? yet this is one of the *exceptions* stated by Meigs.

Let us now see what the *first* review itself says upon the subject, corrected by a passage from Gardien:

"A wise arrangement must exist to prevent the ovum" (just entered the uterus) "from falling towards the mouth of the womb. *The reflexa* which does not exist in quadrupeds, in whom no such danger could arise, must have the effect of *maintaining it at the upper part of the womb*."* Again, "the hydroperione *supports* the reflexa *and its contents*, and *must float* the embryo towards *the highest* point of the uterus."† The first review then goes on to say, that the highest point is the *posterior* wall, but admits it is *in the neighbourhood of the fallopian tubes*. The words are, (p. 351 :) "In other words it (the ovum) must thus be buoyed *up to*, and kept in contact *with*, the *posterior* wall, *in the neighbourhood of the fallopian tube*, which from the position of the uterus, even at this period,

* Dublin Journal of Medical Science, July, 1839, p. 350.

† Ibid.

namely with its axis running downwards and backwards, must form its superior part." This last part, as to the effect of the obliquity of the uterus influencing its *posterior* attachment, is all conjecture on the part of the review; let us see, however, what Gardien says respecting this self-same obliquity; a good authority, I think, on obstetric subjects: "*L'obliquité de la matrice, les positions defectueuses, que prend l'enfant dans la matrice, ne reconnoissent jamais pour cause l'adhérence du placenta, sur telle ou telle région de ce viscère;*"* the obliquity of the womb can in no way influence its (the placenta's) position therein. I believe these facts shew, authority and plates also are in support of my doctrine; and that the first review likewise, in its cool moments, but before its laconic contradictions were introduced into the discussion so repeatedly, also fully agreed with me; it stated the place of its attachment to be the superior part of the womb, in the vicinity of the fallopian tube; (what else did I say?) and its mistake as to *obliquity*, Gardien fully corrects; this then is all I want. Suppose, however, the ovum first attached itself to the *posterior* part of the *upper* part of the womb, as is stated in the first review; to which of the divisions of the womb does it belong? is it the posterior part of the body? or of the neck? or that of the fundus? I have been accused of wrangling about *words*; I hope I am not doing it here.

The explanation given in this part of the review as to how the placenta can be found low down *on the posterior wall*, without the theory of my expansion to put it there, is certainly highly amusing; we have just seen, that according to the first review, the reflexa keeps the germ close up to the neighbourhood of the fallopian tube; (to be sure, according to the second review, that is *not near* the fundus in the second month of pregnancy;) that such in fact is its office, and as that review says, p. 351, "*ac-*

* Gardien, Tom. 11, pp. 167, 168.

cordingly it is here most authors agree, its first attachment is usually formed" in the neighbourhood of the fallopian tubes.

Well, then ; it appears, when the reflexa does *not* keep it up there, but yields or grows before it, (when the case is abnormal,)* "the ovum arrives in the *lower regions* of the uterus before the embryo forms an attachment to it, and accordingly in the *lower regions* of the uterus will its attachment be found at a later period." The review then goes on to discard the "*absurd supposition*" arising from my theory: here is the explanation without such "*absurdity*."

Let us now then turn to the rebouted table of statistics with this doctrine in our mind, and try how many cases it contains, out of the hundred, in which the placenta was within four inches of the os uteri *on the posterior wall*, and which I believe must be admitted to be *low* thereon, and we shall find that they amount to forty-seven. Hence, then we must conclude, that, so far as the first part of human procreation is concerned, nature as often fails in her work, as she succeeds—rather a doubtful thing however ; that this reflexa, of such importance, according to our first review, to preserve the female from the horrors and dangers of placental presentation, is, according to the second, so bungled a concern, on the part of Providence, that it misses as often as it succeeds ; or at least forty-seven times out of the hundred ; what a mistake, likewise, most authors have committed, "in agreeing, that at the fallopian tube its first attachment is *usually* formed:" why, Mr. Carmichael himself has not committed a greater. But this is not all ; the best is still to come on. The first review tells us the womb is oblique ; the *posterior* surface uppermost ; "the *posterior* wall in the neighbourhood of the fallopian tubes, from the position of the uterus *even* at this period, namely, its axis running downwards and backwards, must form its *superior* boundary."† Suppose now then, that the reflexa dropped

* Second Review, p. 12.

† First Review, p. 351.

from the roof of the womb, in forty-seven times out of the hundred ; where would it strike upon, and create its attachment ? According to this obliquity, I should say on the *anterior* part of the *lower regions*, and I think I am pretty right there too : how is it afterwards, then, to make its angle of *reflexion*, to get back again to the posterior and upper wall, which position of it we are now speaking of?—I really am at a loss to inform the reader.

I believe the review must admit the doctrine of Gardien, as to the obliquity of the uterus ; or the “*glissé*” of Velpeau, discarded in the first one, in order to explain this unwelcome posterior position ; the diseased reflexa will scarcely answer ; or perhaps, upon cool, temperate reflection, an explanation *might* be found in “*the absurdity*.” However until the matter is made out somehow, I fancy we may despatch this train of reasoning along with the sixth case,—the argument on words, not their meaning,—the compound alto-superficial-fundal-measurement calculation, all to the *lower regions* ; where, before much time elapses, we shall likewise, I suspect, send the celebrated statistical “table of one hundred,” with all the other matters contained in this review.

On this point, then, I shall only say what I did before ; namely, that if the placenta be *first* formed where the first review tells us “most authors agree its first attachment usually is,” namely, *near* the fallopian tube it traversed ; which is so completely part of, or so near the fundus at that time, that how it can be denied or distinguished from it, I cannot conceive. If, in fact, the reflexa at the mouth of the tube do the office the first review admits nature intended it for, how can it get down on the *posterior* wall, so low, as we can discover it does, by the examination of the membranes ? I should like to have this explained ; particularly if the womb be oblique. That it does, however, exist there, at the close of gestation, is evidently the opinion of the review ; and also that it came there from the fundus ; from the necessity it felt of explaining it away, and

which was hazarded in the very rational and satisfactory mode above stated; we have an admission on it, to the extent of 47 in the 100. How also do the fallopian tubes themselves, in the unimpregnated womb at the top of it; at the cornua; how do they get down, nearly one-half on the *posterior* aspect of the fully gravid womb?* I am at a loss to know, unless my doctrine be resorted to for an explanation. Hear what Velpeau says, as to the *time* the placenta is *first* formed: "On voit donc que le placenta naît, en quelque sorte, avec l'arrivée de l'ovule dans la matrice, et non pas simplement après les deux ou trois premiers moi de la gestation;"† the placenta begins to be formed in a manner, on the arrival of the ovum in the womb. Where are the openings of the fallopian tubes then? In the *lower regions* I suppose.

But the next objection is better again than this, pp. 11, 12. "If we now look into authorities," says the review, "they *one and all* are against Mr. C.; for they inform us, the embryo *may* connect itself to any part of the uterus." In the first instance, who are the authorities, one and all? Why, but one,—Burns; and his opinion is in my favour; I have already given it, tantamount just to what the first review states I said upon the matter: "it is formed at the fundus *with occasional deviations*." Further; so, because the embryo *may* connect itself to any other part of the womb, no person is to speak of it generally; in the way "*usually*" formed. Menstruation *may* go on during pregnancy, notwith-

* This assertion of mine, in my original paper, is denied by the second review, but see Hunter's plates of the profile views of the gravid womb, plate 2: also Cloquet's plate on same, plate 284, tom. v. In Hunter's plates, the progress, as it were, of the descent of the fallopian tubes, during the growth of the womb, may be traced. Plate second shews it at the full period, the tubes one-half down on the womb, and *posteriorly* considerably; plate 23 at the sixth month, the tubes one-third down; plate 27 the fifth month, the tubes one-quarter down; plate 32 the third month, the tubes nearly on the level of the fundus, the child in the womb in all. In Boivin's first plate their position on the unimpregnated womb may be seen on the level of the fundus.

† *Ovologie*, p. 69.

standing which it is said that it then ceases. What an incorrect account of that function we have then, in consequence of the error about it, in this particular. Does the review really mean, that the placenta is not formed first at or near the fundus; or does it say the fallopian tubes do not enter at or near it? One or other of these it must mean.

But the succeeding passage is still better again than those we have been considering; nay I think the best of all. It appears, in opposition to all preceding writers, I have put forward the doctrine, that the placenta is to be found at the close of gestation, low on the posterior part of the womb. How is this declaration of mine met by the review? why by quoting the statements of those very persons on the subject, whose opinion in this respect I have questioned. This is certainly a very novel way of proving the proposal of a *new* doctrine to be wrong; a most admirable method, when argument fails, and therefore very judicious here; namely, shewing it to be in opposition to *old* opinions. The genuine Irish, no doubt, have been always proverbial for adhering to good old opinions; it is said an Act of Parliament was once obliged to be passed, to compel them to desist from ploughing from horses' tails; and that it was afterwards enforced only by coercive measures; and certainly if the practice in this respect be good, and that no person ought to do or suggest any thing contrary to what is to be found in books—I admit this blow finishes me.

With what severe displeasure, however, I deserve to be visited, for having so inconsiderately, in my original paper, doubted the veracity of the placental function being suspended by compression, a length of time previous to the birth of the child; when I found the contrary opinion *already stated in books*, by such men as Baudelocque, Gardien, Capuron, and the like! how fortunate for me, that this my temerity escaped notice! what a castigation otherwise I must have received for so doing, from the reviewer from the Britain-street Hospital! A host of authors, however, are brought forward in support of

the review, "joining issue with me" for saying, "I believe since the appearance of my paper, attention has been very much drawn to the examination of the secundines, and I need not observe what tale they, *I shall not say in every instance, tell*, inasmuch as *one or two* exceptions may be found in the hundred."*

Unfortunately, however, these authors speak not of the placenta's *general position*, but rather chime in with the above passage of mine, which they are brought forward to annihilate; their testimony is, that it is *not constantly, not uniformly, not always, not invariably* fixed *one* where—what a loss there was for materials, to extinguish my absurd paper upon the placenta with; which among other things states, that the placenta, at the close of gestation, is at the posterior part of the womb, *with occasional deviations*, when only this kind of trifling, could be made out for that purpose. I should wish the reader to turn to the second review, pp. 13, 14, 15, and peruse them, with a view to this reading. To be sure among "*the highest authorities*" there mentioned, "*the brightest luminaries* that ever graced our Profession;" the REVIEW!! together with *its experience and researches on the subject*, is coupled in finishing me, on this point of *my incorrect theory*.

Against all these, however, I do put forward my solitary opinion, if they be brought forward as authority against its low posterior position; and as I know I have succeeded in proving it, and that to the satisfaction of those who have tried it extensively; always of course excepting persons, who would wish I had not been so fortunate, and who are interested in the contrary result. I must acknowledge the high compliment paid me by the review, (p. 13,) namely, that having done so "I stand *alone*, in opposition to an array of the highest authorities, and brightest luminaries of our Profession." The interesting line of argument above alluded to, will be found in review the second, pp. 13, 14, 15, 16.

* Review Second, pp. 13, 14.

Towards the close of this closely, and well maintained argument against me, it is stated, that to this host of *former* authorities on the subject, I oppose my own *four cases only*; "therefore, forsooth, his (Mr. C.'s) *MUST* be its natural position. ALL OTHER OBSERVERS ARE IN ERROR."*

It would appear here as if the review reached the very height of its displeasure against me; and in it fell into that state of obliviousness that those under the influence of such excitement generally experience; and which we have found it in, on so many former occasions; for while it states my most absurd opinions rested on *four cases* of post mortem examinations *only*, it forgets what, in a subsequent passage, it remarks, viz., that the position of the placenta in the womb may be ascertained by observing the *secundines* after their delivery, and that these opinions of mine were founded upon some hundreds of such observation, and was so stated in my original paper. By way of being conclusive upon the matter, however; proving to a demonstration I was wrong in the place I allotted to it, Velpeau is quoted, who observed the position of the placenta in thirty-four cases, "*in situ*," in females who died during pregnancy, *or recently delivered*. This is done to do away with the objection I made in my last paper, as to the relative situation of the womb being so changed *when recently delivered*, after the child is expelled, that the position the placenta occupied in it, when distended fully *before delivery*, could not be then satisfactorily ascertained by the hand in the womb, or post mortem examination. In how many of these thirty-four cases, however, was the placenta observed *before* delivery, and therefore applicable to the "*seasonable aid*," as it is said, it gave the review? Let Velpeau himself speak: "*huit fois j'ai pu l'observer* (the placenta,) *en place après le quatrième mois*;"† eight times *after the fourth month*; but we are not told if any were at the *full* period, when I said it was low down; and therefore this testimony

* Review Second, p. 16.

† *Ovologie Humain*, p. 64.

of Velpeau's goes for nothing. Cruveilhier somewhere remarks, that women *rarely* die near their full time; we had but five cases these last six years in the practice at the Coombe; and but one could be quoted as having occurred in Britain-street, and that certainly a very unusual one; very rarely indeed met with—a female affected with consumption.

I regret I must here for the present stop, in the further consideration of this second review. To reply, however, to forty pages of a critique containing such valid objections as those we have been discussing, would occupy too much of one number of this Journal, for me to expect such indulgence; I must therefore defer the remainder of it till the next number.

(*To be continued.*)

ART. XXIV.—*Contributions to Midwifery*, No. III.—*A Case of Pregnancy complicated with a Tumour, occupying nearly the entire Pelvis.* By THOMAS EDWARD BEATTY, M.D., M.R.I.A., Consulting Accoucheur to the City of Dublin and New Lying-in Hospitals, Lecturer on Midwifery, &c.

ON the 18th of January last I was requested to visit Mrs. —, a lady of tall, erect figure, well formed, and healthy, thirty-two years of age, and pregnant for the first time. She was then in the eighth month of gestation, having menstruated last on the 17th of the previous May. She stated that up to the time of her pregnancy she had enjoyed good health; but that soon after that occurrence, she began to suffer from distressing symptoms in the pelvic viscera. The bladder became very irritable, with frequent desire to pass water, and often attended with much difficulty in discharging its contents. The expulsion of the contents of the bowels was also impeded, and an unusual degree of constipation was the result. These symptoms increased until the third month, when they had arrived at such a pitch, as to compel her to apply to a physician for assistance. After quickening, which

occurred at the end of the fourth month, all these local annoyances vanished, and she continued in good health till the time of my visit. She mentioned that there was a tumour in the upper part of the abdomen, which had first been observed in the right inguinal region, and had risen gradually with the progress of pregnancy. I expressed a desire to examine this tumour, and waited on her the following morning for that purpose. I then found the uterus distended as usual in the eighth month of pregnancy, with a hard, round tumour projecting from the right side of the fundus, about the size of a large orange, and with a flat broad base. An irregular protuberance, not so large as the former, was found to exist at the opposite side of the uterus, and the whole fundus had an irregular knobbed feel. In addition to these excrescences, which were manifestly growths from the uterus, a small tumour, about the size of a tennis ball, was perceived high up in the right side under the ribs. This was moveable, and at times, as the patient stated, escaped altogether from the touch. This tumour had been observed by her before the occurrence of pregnancy, and had never occupied a lower position. Feeling pretty certain that the tumours attached to the uterus were the common fibrous tumour, and knowing that these are often not confined to one part of that organ, I was led to suspect that the symptoms complained of in the early months of gestation, might have been produced by the existence of similar growths from the lower part. To satisfy myself on this point, I proposed, and with much difficulty obtained permission, to make a vaginal examination, when to my very great consternation I found the entire pelvis blocked up by an enormous dense mass. About an inch from the orifice of the vagina, the finger came in contact with a globular body, projecting the vagina forwards, and compressing that canal so much towards the symphysis pubis, that the point of the finger could barely pass upwards between them, but not sufficiently high to enable me to ascertain what lay above the brim; the higher the finger passed the wider the tumour expanded, and it appeared to be

continuous with a substance curving forwards over the brim of the pelvis, which could be only barely touched with the extremity of the finger, but nothing like the os uteri could be distinguished. The vagina, as it lay in front of this mass, seemed free from any adhesion to it, and was quite healthy throughout. Having examined the anterior relations of the tumour, I proceeded to discover its situation posteriorly, and passing my finger into the rectum, it very soon encountered the back of this morbid growth, pressing upon the anterior wall of the rectum, and flattening that intestine against the hollow of the sacrum. The rectum seemed, equally with the vagina, to have no adhesion to the tumour, and its walls were healthy as far as the finger could reach. It was thus manifest that the tumour lay between the vagina and rectum, and from the absence of any connexion between it and either of those canals, I inferred that it was placed within the cul de sac of peritoneum that passes down between them, having pushed that membrane before it until it almost rested on the perineum. The surface of the tumour, as felt in the vagina and rectum, was uniformly smooth, and of great hardness, and no where gave the least indication of containing fluid. At first it appeared quite immoveable, but it was afterwards ascertained to yield a little to steady pressure upwards, exerted from the rectum and vagina at the same time. On examining the inguinal regions, no trace of tumour could be detected on either side, and it was thus made plain, that if the mass extended into the abdomen it must lie behind the uterus. Nothing certain on this point could be determined; but from the abdomen not being more than usually prominent, and from the total absence of tumour in the groins, I was inclined to think that the morbid growth did not reach higher than the back of the cervix uteri, and that it was in fact a growth of a kind similar to those attached to the fundus. The motions of the foetus were distinctly felt through the abdominal parietes. The foetal heart was audible high up on the left side, near the umbilicus; and the placental souffle was so

strong in the right groin, that it was as distinctly perceptible by the hand as by the ear. On laying the hand flat over the region in which the sound was heard, a remarkably distinct thrilling sensation was communicated, which conveyed to the mind just the same ideas that are produced by the audible phenomena.

I immediately informed the lady's husband of the critical position in which I found her, and I requested a consultation on the case. Dr. Johnson was selected to meet me, he having seen the lady during the first months of her pregnancy. We met on the 21st; Dr. Johnson stated that at the time he had seen our patient, the existence of pregnancy was doubtful. He had made a vaginal examination, and found the pelvis occupied as at present, and he requested to be informed when quickening took place, in order that some plan of proceeding should be determined upon; but the distressing symptoms under which she had laboured, having disappeared at that time, she neglected to communicate with Dr. Johnson, and took no further steps about her situation until the present time.

Dr. Johnson was equally unsuccessful with myself in his attempts to reach the os uteri; he thought he could distinguish something like it by forcing his finger between the tumour and pubis as high as the impatience of the patient would permit, but the parts were so indistinct that it was impossible to determine whether the object was not a fold of mucous membrane.

Dr. Johnson agreed with me in the opinion I had formed of the case, and the great probability that delivery could only be accomplished by the Cæsarean section; and seeing its great importance and most likely termination, he suggested that a fuller consultation should be had. Accordingly Dr. Collins was added, and he saw the lady on the 24th. On that occasion Dr. Collins suggested the probability, that the foetus was placed with the breech downwards, in consequence of the height at which the foetal heart was audible. It was now agreed that full preparations should be made for the Cæsarean operation, and Mr. Cusack having been chosen as the operator,

it was judged right that he should see the patient, and examine her previous to the occurrence of labour.

Mr. Cusack visited the lady with me on the 28th, and on the 30th we had a full meeting consisting of Drs. Johnson and Collins, Mr. Cusack and myself. It was now agreed that we should wait for the occurrence of labour, and after the uterus had been allowed to act for a few hours, if no favourable change was effected, that the operation should be performed before the patient's strength was exhausted. The uniform and great density of the tumour precluded any hope of reducing its size by puncture; and at the same time led us to expect little yielding of it to compression, when labour would set in; and any attempt at extirpation, besides the impossibility of performing it completely, was looked upon as equally, if not more dangerous than the Cæsarean section.

From this date I continued to watch my patient with painful anxiety. Nothing of importance occurred until February 18th, when I found her labouring under a distressing cough, which produced false pains. She complained of headach, flushing of the face, giddiness, and indistinct vision, together with loss of sleep; her pulse was fast, and her skin hot. Under these circumstances I did not delay to abstract 18 oz. of blood from her arm; and on visiting her the following day, (19th,) I found the depletion had been followed by very decided relief, and she had enjoyed good sleep during the night.

21st. Labour commenced shortly after midnight by a smart gush of hæmorrhage, which continued for nearly an hour, and was succeeded by pains; I was sent for at half-past one o'clock, A. M., and on my arrival I found that the hæmorrhage had ceased; but from what I saw it was manifest that it had been very abundant. On making a vaginal examination, I was surprised and gratified to find that the tumour felt higher up in the pelvis than it had done formerly; that it did not approach so near to the perinæum, and that the finger could pass more freely between its anterior surface and the symphysis

pubis. I could now reach the expanded cervix of the uterus with the point of my finger, and I could trace distinctly the continuity between it and the tumour, but the os uteri was nowhere to be found. I now, according to pre-arrangement, summoned Dr. Collins, who arrived at half past two o'clock, A. M. The pains continued through the night, but were feeble and inefficient. We remained with our patient, and at nine o'clock, A. M. Dr. Johnson joined our consultation. The tumour had now receded so far that there was room for two fingers to lie laterally between it and the pubis; but still the os uteri could not be distinguished, although a greater portion of the cervix had come within reach, forming a round and elastic tumour above the brim of the pubis. The pains being still weak, a purgative enema was administered, by which the bowels were freed, but no decided improvement in the character of the pains was affected. Four o'clock, P. M. Drs. Johnson and Collins visited again; no material change had taken place, and the pains had nearly subsided. We met again at ten o'clock P. M.; there was no return of uterine action, and we agreed to throw an opiate enema into the rectum, in the hope of refreshing and recruiting our patient's strength by sleep.

22nd. We met by appointment at seven o'clock, A. M. and found that our medicine had produced the effect we desired, the lady having enjoyed several hours of tranquil sleep. There was no return of pain, but about six o'clock another gush of blood occurred from the vagina, which continued to flow for about an hour. A very decided change had now taken place in the condition of the parts; the expanded cervix uteri was now retracted, and corrugated into a fleshy ridge, occupying the angle at the upper part of the great tumour, where it had appeared to be continuous with the substance of the uterus; this was in fact the posterior lip of the os uteri, now dilated; and anterior to it, the transparent membranes could be felt, forming a smooth, tense, and elastic tumour, about the size of a large nut. The uterus recommenced to act at nine o'clock, A. M.,

and at twelve o'clock the pains were of a more decided character than they had yet been. The elastic tumour formed by the membranes was more distinct, and protruded into the vagina. The great tumour had receded so much, as to leave the lower part of the pelvis free, and thus enabled me to pass my hand into the vagina, a thing quite impossible before. The pains continued to increase in strength, and getting my knuckles applied to the tumour I made steady pressure upwards in the direction of the axis of the brim of the pelvis, and I was gratified to find, that as I pressed, the tumour was sensibly elevated, and the membranes advanced more and more into the vagina ; great care was taken not to rupture the membranes during this operation. The spontaneous discharge of the waters took place at half past two o'clock, P. M. and on making an examination, I discovered the breech of a male child presenting with the back to the pubis of the mother. This was an additional cause of rejoicing, and the anticipations of difficulty and danger which clouded the commencement of the labour, were now in a great degree dispelled.

It had been arranged at our last consultation, that if the breech was found presenting, when the membranes broke, I should pass up my hand, and try to get down the feet ; this I endeavoured to do, but although I got my left hand fairly into the uterus, so as to reach the knees of the fœtus, I found I could not bring down the feet, without using more force than I thought commensurate to the advantage likely to accrue from the proceeding. The difficulty arose from the limited space left free at the brim of the pelvis ; about the anterior half, being the entire portion not occupied by the base of the great tumour ; and in addition to this, on passing my hand into the uterus, I found that the tumour projected into its cavity, so as to encroach upon its dimensions, and diminish the space through which the legs must sweep in coming down. Finding this, I relinquished the attempt, and left the uterus to effect what it could, in propelling the infant. The labour was not strong, and the pains,

though frequent, were not very efficient. At eight o'clock, P. M. Dr. Collins came to me ; at that time both hips of the fœtus could be felt, and the scrotum had become very much swollen from the continued pressure. The pains had gradually diminished in strength and frequency during the last two hours, and the patient's pulse had risen to 100. Under these circumstances we determined on assisting the delivery and I passed the forefinger round the left groin of the infant ; no force that I could employ made the least alteration in the position of the presenting part, and after Dr. Collins had tried in a similar manner with like success, I passed the blunt hook round the groin, and by steady traction exerted for about half an hour, I got down the breech and feet. There was some delay in getting out the head, so much so, that I thought we would be obliged to resort to craniotomy. This, however, would not have been of any consequence, as the funis had ceased to pulsate before the breech was extracted.

The head was finally got past the tumour unmutilated, and the delivery was safely accomplished at nine o'clock, P. M. being thirty-nine hours from the commencement of labour, including the intermission of the pains, on the evening and night of the twenty-first ; no hæmorrhage followed the removal of the placenta, which took place in half an hour after the birth of the child, and in two minutes afterwards, the patient was in a sound sleep, in which I left her at eleven o'clock.

23rd. Ten o'clock, A. M. Passed a restless night, with unpleasant dreams, and frequent starting from sleep ; makes no complaint, except of general soreness. The uterus is nearly as high as the umbilicus, and the tumours on the fundus are very prominent ; a large projection from the uterus occupies the right inguinal region. Some tenderness of the abdomen ; pulse 104 ; skin cool ; no thirst ; has not passed water ; lochia natural.

℞ Pil. Hyd. Pulv. Ipecac. Comp. āā gr. ii.

M. ft. pil. 3tia q. q. hora sumenda.

Warm fomentations to the abdomen.

Nine o'clock, A. M. Some disturbed sleep through the day; passed water freely three times; a slight rigor at eight o'clock; abdomen very tympanitic; no pain, but very tender on pressure; passed a large quantity of flatus; pulse 110.

℞ Aq. Cinnam. ʒi.
Pulv. Rhei gr. x.
Magnes. gr. viii.
Tinct. Rhei ʒii.
Mannæ ʒii.

M. ft. haust. statim sumendus, et repr. primo mane.

24th. Nine, A. M. Took both draughts; bowels not freed; suffered much through the night from flatus; great tympanitis; belly very tender; pulse 120; no thirst.

Ordered an emollient enema, with Spt. Terebinth. ʒii. Cont. pil.

Twelve o'clock. Bowels well freed; great relief. Nine o'clock, P. M. As before.

25th. Nine, A. M. Had severe pain in the early part of the night; got Ol. Ricini ʒii. at two A. M., which operated at four o'clock, with great discharge of flatus, followed by quiet sleep. Belly still tender; external parts very much swollen; suffers much from piles.

Cont. pil. A poultice to the perinæum.

Nine, P. M. Has slept two hours; less tympanitis; belly tender; pulse 120.

26th. Nine, A. M. Had some sleep; belly not so tender; bears pressure better; pulse 112; tongue clean.

Hau. Ol. Ricini c. Spt. Terebinth. ā ā ʒij; chicken broth.

Nine, P. M. Passed two large evacuations with a great quantity of flatus; took a cup full of the broth; feels easy.

27th. Breasts now, for the first time, painful and hard, lochia abundant; pulse 112. Belly less tender, and free from swelling; Piles very painful. Chicken broth again.

From this date she improved gradually until March 1st, when Dr. Collins retired from the attendance.

March 5th. Slept well, pulse 90; says she is quite well; and

free from any uneasiness: is very hungry for her dinner, and asked leave to have her bed made this evening. The uterus has diminished in size, but is very irregular on its surface, and the right groin is still filled by the hard tumour already described.

This lady's recovery was very complete, and she was able to ride out in a carriage in the fifth week after delivery.

Thus terminated, in a manner very different from what had been anticipated, one of the most interesting cases that has ever fallen under my observation. When we consider the manner in which the pelvis was blocked up by a tumour nearly as large as the head of an infant at birth, leaving not room for a finger to pass between it and the pubis; and when the dense and unyielding nature of the mass is recollected, it seems almost incredible that a foetus at the full period should have been born whole and un mutilated, without any operation for the removal of the obstructing body. A reflection upon the nature of the tumour, its situation, and attachments, and also upon the manner in which the uterus contracts upon its contents in labour, will help to explain the extraordinary spontaneous elevation that was effected. I have already stated, that at the time I made the first vaginal examination, I was impressed with the belief that the tumour was of the nature of the common fibrous or fleshy tumour of the uterus. In arriving at this conclusion I was much influenced by the presence of the tumours attached to the fundus uteri, about the nature of which there could be little doubt, as well as by the feel of the great tumour itself. The great density, as well as the absence of elasticity, showed that it contained no fluid, and hence that it could not be one of those enlarged ovaries, which, becoming distended with fluid or semifluid matter, sometimes fall down into the pelvis, below the os uteri, and impede delivery.* Its situation between the vagina and rectum precluded the idea of its being similar to those steatomatous growths which have been found attached to the parietes of the

* Vide Merriman's *Difficult Parturition*, plate 1.

pelvis, a very remarkable instance of which is recorded by Dr. Drew, of Fermoy,* in which, by a judicious and bold operation, that physician removed the obstruction, and saved the patient. This opinion, respecting the nature of the tumour, was confirmed afterwards during labour, by tracing its connexion with the cervix uteri in the first instance, and by finding, at a subsequent period, when I passed my hand into the uterus, that the tumour projected into its cavity, and implicated in fact both surfaces of the cervix. The situation of the tumour was proved to be the cul de sac of the peritonæum, by its position between the rectum and the vagina, and the subsequent elevation of it out of the pelvis. The only attachment it had was ascertained during labour to be to the back of the neck of the uterus. In addition to these points, it is necessary to bear in mind that the axis of the uterus deviated considerably from the usual line, previous to the accession of labour; the os, instead of occupying the middle or posterior part of the brim of the pelvis, being directed so much forwards as to be placed above the symphysis pubis. It is manifest that under these circumstances, before the contents of the uterus could be expelled, the obliquity of the organ should be rectified, and accordingly we find the first efforts of labour directed to this point, which was in a great measure accomplished by the gradual retraction of the posterior portion of the neck of the uterus, and the shortening, of the long diameter of the whole organ, by the contraction of its longitudinal fibres. This could not be effected without at the same time drawing the tumour to which it was attached along with it, and thus elevating it out of its position in the pelvis. In this manner, by the natural efforts of the uterus, aided by subsequent pressure with the hand, this formidable obstacle to delivery was removed so far as to enable the organ to expel its contents.

That the uterus is capable of diminishing its long diameter will be admitted by all who have studied the arrangement of its

* Edinburgh Medical Surgical Journal, vol. I.

fibres in the gravid state, and watched the phenomena of labour; and I might content myself by reasoning upon this in support of the explanation now offered of what took place in the instance just detailed; but as a case in illustration often does more than argument in support of a position, I will take the liberty of adducing a very remarkable proof of the power of elevating its lower portion possessed by the uterus, which I find recorded in the Medical Museum.* The case is related by Thomas Antrobus, surgeon, in Liverpool.

"Sarah Parr, aged 33, and the mother of three children, in May, 1759, as she was wheeling clay to make bricks, was of a sudden seized with prolapsus uteri, and continued in that condition, without asking any advice, till the 4th of September, 1760, at which time she made application to the Liverpool Infirmary, and was admitted a patient under my care.

"Upon examination, I found the os tincæ and neck of the womb protruded out of the vagina to a very large size, much inflamed, some small ulcerations about the os uteri, and a discharge of matter issuing from them; at the same time she informed me she was quick with child. I much doubted what she said; and thought from the appearance I then saw, she was imposing on me, and that it was morally impossible what she then related could be true. I introduced my finger through the diseased and prolapsed mouth and neck of the womb, which were both sufficiently dilated to admit it, but could not perceive the least appearance of conception by the touch; nor was it possible I could, as the parts were so tumified, and she at that time could not be pregnant much above four months, reckoning from the first time I saw her to the time of her delivery. To abate the pain and inflammation, I ordered her to be blooded; a lenitive electuary to keep her bowels easily open; the part to be fomented with an emollient fomentation, and to be anointed with the liniment. alb. By this method she became easier, the

part softer, and less inflamed. I attempted then to replace the prolapsion, but found it impossible, unless I had used more violence than I thought was consistent with safety.

"As the woman came twice in the week to the infirmary, I had frequent opportunities of examining her condition, and at last was sufficiently convinced she was with child, which gave me reason to imagine I was mistaken in the parts fallen down, and that it could not be a prolapsion of the uterus, but of the vagina; for I could not apprehend how it was possible a woman could conceive when the os uteri was protruded out of the external orifice. But when she was in labour, and the prolapsion receded, the internal orifice, which before did appear externally out of the labia, had the same scirrhus appearance to the touch internally, as it had to outward perception, and through this orifice the child was delivered, when the prolapsion came down again out of the body, with the child's head inclosed in it; which proves to demonstration, it was a prolapsion of the cervix and os uteri, and not of the vagina.

"As this tumid body became so large near the end of gestation, the poor woman and her mother earnestly entreated me to attend her in labour, which I readily promised, as the case was very extraordinary. When she had gone her full time, she gradually fell into labour, about six in the morning, on the 31st January, 1761. At ten I was desired to see her; accordingly I visited her, and when I approached the bed, she informed me all that great swelling, as she called it, went up of a sudden into her body again in the first pain, though it had never returned before, since it first came down. I asked her if she was certain it returned when the pain was on her, or in the remission? she answered me, when the pain was strong upon her, as she lay on her side, and that it gave her great pain as it went up.

"How the sudden disappearance of this part, which had so long been elapsed from its natural position, and which at any other time before labour, could not be returned by art, but upon the first attack of her pains did recede, I must confess

seems difficult to account for. Whatever was the cause, when I came to examine by the touch, I found the whole prolapsion returned, the os uteri to point in its natural situation, but grown exceedingly scirrhus, as I have observed before, by being so long exposed to the cold air, and from the great degree of inflammation which had attended it."

Thus far is all it is necessary to quote of this very extraordinary case,* in order to support the view I have taken of the means by which the removal of the obstructing tumour was accomplished, in the case I have detailed. I think there can be little doubt, that the same cause effected the elevation in both cases, and that was the contraction of the longitudinal fibres of the uterus on the accession of labour.

The distress which this lady suffered in the pelvic viscera during the early months of pregnancy, is attributable to the gradually increasing size of the uterus, which, added to the bulk of the tumour already occupying the cavity, must have made

* For the satisfaction of those, who may not have an opportunity of consulting the old record, in which Mr. Antrobus' case is preserved, I extract the remainder of his account of it.

"As the pains were true and strong, as the head presented, as there was no flooding, nor any symptom which threatened immediate danger of life, I left the work to be done, by the force of the natural pains for many hours, but at last, found them not sufficient to dilate the vastly rigid os uteri. The waters were well collected before the head of the child; though the os tincæ, in twelve hours, was not dilated much above the circumference of a crown, yet the pains were true and strong all the time. Afterwards I endeavoured gently to dilate in every pain, and by my assistance, I found the os uteri to yield a little; at last the membranes broke, the waters ran off, the uterus contracted more forcibly upon the body of the child, and propelled the head through the external orifice, enveloped in the parts which had before prolapsed. Notwithstanding the head of the child was advanced out of the body, I found the greatest difficulty in extricating it out of the vastly restricted os uteri, but at length by oiling well the parts, and by pressing back the prolapsion with both my hands, towards the os pubis, the head became more elongated, and was soon born; the remainder of the body and the placenta followed easily; I then replaced the prolapsion into its natural situation with my hand, and left the poor woman to rest, who has been remarkably well ever since, and is now out of all danger,"

considerable pressure on the bladder and rectum ; and the subsequent relief of those symptoms was owing to the elevation of the uterus at the time of quickening, when ceasing to occupy the pelvis, it became lodged in the abdomen, and thus diminished the pressure to which the pelvic viscera had been exposed.

The manner in which the child presented was most fortunate, and contributed greatly to the facility with which the delivery was accomplished ; for had the head appeared first at the brim of the pelvis, I much doubt if it could have passed without the use of the perforator.

This case may be considered important in many respects, but in none more, than in tending to increase our dependence upon the resources and efforts of nature, under circumstances apparently hopeless ; and affording a caution not to proceed hastily to the performance of operations, before we have the most ample evidence, that the natural powers are unequal to the task, or that the continuance of their exertion is dangerous to the mother.

I cannot conclude, without expressing my warmest thanks to Drs. Johnson and Collins, for the very kind and able assistance they afforded me, in the management of this interesting case.

ART. XXV.—*On the Utility of the Oxymuriate of Mercury in the Strumous Ophthalmia.* By JOHN HAMILTON, M.R.I.A.,
Corresponding Member to the New York Medical and Surgical Society.

THOSE surgeons who have had much dispensary practice in Dublin, well know how very frequent scrofulous affections are amongst the poor of the city. All the causes usually assigned by authors as exciting this disease here abound ; cold, damp, dirty, and ill-ventilated houses, in streets or lanes which, except

in the midst of summer, present pools of stagnant, filthy water ; the rooms and cellars in houses so situated overcrowded by half fed and not half clothed children, wanting covering for head or feet. Thus exposed to the inclemencies of a damp and variable climate, without the defences of clothing, or proper diet, these poor children fall ready victims to the disease, and present every variety of strumous affection in the most aggravated degree, affording ample opportunities of studying scrofula, and of testing the value of the various remedies.

It is my intention at present to confine myself to the consideration of one of the most frequent, and not the least distressing form of the disease, the strumous ophthalmia, in the hope of calling the attention of the Profession to a more effectual mode of cure than those most commonly recommended and used.

The treatment proposed by the different writers on this disease presents much sameness ; they do little more than echo each other ; to have read one, is nearly to have read all. The administration of some of the various tonics, bark, quinine, colombo, rhubarb ; the preparations of iron, and of idoine, particularly hydriodate of potash, and in acute cases, touching the mouth with mercury, are the constitutional means recommended ; leeches, blisters, issues, the application of the citrine and other ointments between the eyelids ; vinum opii dropped into the eye, and lotions of zinc, lead, and nitrate of silver, &c., constitute the local ones. To these change of air, nourishing diet, and warm clothing, are added as indispensable.

There can be no doubt that the disease is thus often cured, but it must also be allowed that these means often fail, and all authors are agreed on the tediousness and obstinacy of the complaint. What I believe more frequently to take place is, that after a persistence in some of the above plans of treatment for two or three months, the eyes are nearly, but not quite well, a slight pinkishness of the eye, and slight intolerance of light, alone remaining. This sub-acute state may last for weeks or months, its duration depending a good deal on the season of

the year; then comes an acute attack with phlyctenæ on the cornea, ending in ulcers, and attended with great distress, obliging the patient again to apply for relief, which it is more difficult to afford than before. I have met with instances where years have been thus passed, the eye never thoroughly well. By degrees the cornea becomes the seat of one or more opacities, to which vessels pass from the conjunctiva, or it loses its lustre, becomes of a faint greenish hue, and its surface is dimpled over with numerous minute depressions, and small vessels may be seen entering its substance. This state is very often seen at the upper half of the cornea, the red vessels pass straight down, and are of large size, and on everting the upper lid, it is found to be red and granular, a truly obstinate condition. A still worse in appearance, though, I believe, really less rebellious to treatment, is, when the whole cornea becomes so vascular and opaque, that the iris and pupil are with difficulty discernible; this is accompanied by almost total blindness.

The conviction on my mind is, and I trust I shall not be thought by practical men to overstate the fact, that the effect of the usual treatment, is certainly slow, and often unsatisfactory, and this in the best hands. I have, therefore, been induced to lay before the Profession some evidence in favour of a remedy whose efficacy appears to me superior to that of any other I have tried myself, or seen tried. I allude to the oxymuriate of mercury given in small doses, so as to act as an alterative or tonic.* By its use I have seen strumous ophthalmia disappear, which had resisted all the ordinary means for

* To young children the dose has generally been the one-sixteenth or one-twelfth of a grain twice a day: to adults the one-twelfth or one-eighth. The vehicle those in common use, Tinct. Cinchon. or Tinct. Rhæi, and occasionally spirit of wine. The medicine has been directed to be given one hour after meals. The only unpleasant effects from its use have been sickness of stomach or griping, by stopping the medicine for a day or two in both instances, and the administration of a little castor oil in the second, these effects have speedily ceased.

months, and even years, and this benefit has resulted in cases severe, but not aggravated, in from two to three weeks, and without, in the majority of instances, change of air, or altered diet, a fact of great interest, as among the poor these are unattainable. A few well-marked cases will best enable the reader to form his own judgment.

CASE I.—Mrs. Smith, wife of one of the messengers of the Castle, and residing in one of the low damp rooms under the treasury chambers, brought her daughter, two years old, to me in September last. The child's appearance was very sickly, and she laboured under strumous ophthalmia of the right eye, in a severe form; the eyelids were red and rather swollen, the eyelashes matted together with dry scabby matter, and the intolerance of light was so great, that she kept the head down and turned from the light, with the eyes obstinately closed, and screamed violently at the least attempt made to examine them; when opened, the eyeball was rolled up, and all that was visible, was a small portion of the florid conjunctiva; the mother said there was a speck on the eye. She had been ill a year, the eye having become bad on the drying up of an eruption behind the ears. During the whole interval the eye had been bad, at times worse than at others, had been subjected to various treatment ineffectually, and was now worse than ever.

I wished the child to be removed from its present unhealthy abode to the country, but that could not be done. I therefore ordered the one-sixteenth of a grain of the oxymuriate in decoction of bark three times daily. Dilute citrine ointment between the eyelids at night, and a drop of vinum opii in the eye every morning, with occasional purges of jalap and scammony powder.

At the end of three weeks, she having taken the oxymuriate only a fortnight of the time, the improvement was most striking; "the eye was kept half open in a bright light, was not

bloodshot, the appearance of the eyelids and eyelashes nearly natural." I ordered a repetition of the oxymuriate, and at the end of ten days she was quite well, a small grey speck in the situation of the ulcer being all that remains, and her general appearance greatly improved. Rather more than two months after this, I saw the child for hooping cough, and it was with difficulty that any remains of the speck could be discovered.

CASE II.—Thomas Power, ætat. 4, son of a policeman, was brought to me last November 19th. He had suffered from sore eyes for fifteen months; about seven months since they became so bad that he applied to a medical gentleman under whose care he was for three months, and the treatment then used appears to have been very proper, but the eyes, though somewhat improved, were far from well, and for the last four months have gradually got worse, so that at present, he is nearly blind. The intolerance of light is excessive, he holds the head down, and keeps the eyes firmly shut, the upper lids red, tumid, and the cutaneous veins enlarged; the edges are red and swollen, and stick together, the eyelashes long and irregular; when the eyes are attempted to be examined, there is such spasm of the lids, that only a small part of the conjunctiva is visible; but his mother says there are specks on both eyes.

Pulv. Jalap. et Scammon. gr. xii. statim sumend. Vesicatorium vertici. A drop of Vin. Opii to be put in each eye every morning, and a little of the Ung. Præcip. Rub. Dil. between the eye-lids at bed-time.

20th. The intolerance of light was not quite so great to-day, so that I was able to see, though with much difficulty, a large speck at the lower half of each cornea, to which a bundle of red vessels went. Bowels had been well opened.

R Decoct. Cinchon. xiv.

Tinct. Cinchon. 3 ii.

Oxy. Hydrarg. gr. i.

Fiat mist. coch. i. min. bis in die horâ post prandium.

At the end of three weeks he was greatly improved, and opened the eyes without pain.

December 30th. I saw him to-day, quite well of the intolerance and other evidences of the existence of inflammation, but there were two large grey specks leading from the centre of each cornea, and occupying its lower half. He has taken three grains of the oxymuriate, the two last in tincture of bark alone. I have no doubt of being able considerably to lessen the specks on the cornea, though, from their extent and depth, it will be a work of time. Dr. Lees saw this case.

CASE III.—A young man, *ætat.* 20, a shoemaker, in the employment of Monsieur Buet, of Grafton-street, pale and sickly looking, but not thin, came to me with severe strumous ophthalmia of both eyes, great intolerance of light, obliging him to keep the head down and the eyes nearly closed; the eyelids are red, and stick together in a morning, the eye is not generally vascular, but there is a dull, pink zone round the cornea; it is, however, extremely difficult to examine the eye, from the pain caused by the light, and there is profuse lachrymation in doing so, or when he looks at any object long; he is subject to headach referred to the vertex. From the state of the eyes he is able to do but little work, and that with pain and difficulty. The disease is of six years' duration, never entirely absent, with occasional exacerbations; he has been under several eminent surgeons, and has undergone the ordinary treatment, apparently exhibited in the most judicious manner; for three months he was in one of the large hospitals of the city, and thinks he left it rather worse than when he entered it. He was put on the oxymuriate of mercury, and the dilute citrine ointment. At the end of three weeks he was better than he had been since the disease first began, being, in fact, quite well, except some redness of the eyelids, and a small nebula on the cornea, a little to the right of the centre of vision. The improvement began at the end of a fortnight; he took altogether two grains of the oxymuriate, when slight salivation was induced. The nebula so completely disappeared, that he afterwards enlisted.

CASE IV.—July 27th, 1838. George M^cKnight, ætat. 6, was sent to me by the Rev. C. Stanford, Perpetual Curate of Glasnevin; he was a delicate looking boy, fair hair and complexion, and had enlargement of the cervical lymphatic glands. The strumous ophthalmia was so severe in this case also, that it nearly amounted to blindness; the intolerance of light excessive, particularly of the right eye: in the centre of the cornea of this eye was an opacity of a grey colour, deepest in the centre, and quite obstructing the direct rays of light through the pupil, a pale pink zone of vessels existed round the cornea, the lids were red and stuck together in the morning; there was a smaller opacity on the left cornea, but little redness of the eye, or affection of the eyelids; profuse lachrymation. Has had weak eyes since he was nine months old, and has sometimes been nearly blind from them; he has been under the care of medical men of deserved eminence, and besides various medicines, has been frequently blistered on the head and behind the ears.

I ordered a blister to the vertex, a drop of vin. opii in each eye every morning, and the dilute citrine ointment between the eyelids at bed-time.

R. Tinct. Rhei, ʒ ii.

Oxy. Hydrarg. gr. i.

Fiat mist. coch. i. parvum bis in die.

Aug. 2nd. (Four days after he began the oxymuriates.) Much improved, speck nearly cleared off the left cornea, and decidedly lessening in the right, though still extensive.

8th. The left cornea is nearly quite clear, a faint nebula alone remaining, the right eye greatly better.

In about a week after he was so well that I discontinued the oxymuriate, and directed the continuance of the ointment and the vin. opii for some short time longer. The Rev. Mr. Stanford to whom I wrote to inquire about this boy, tells me that there is still a slight speck on the cornea of the left eye, but that the eyes are otherwise perfectly well, and that he got him to read with the right eye, which had been the worst, with

the other shut, and that though exposed to cold and wet, there had been no return of the complaint.

It would be easy to add to the cases already given, others from my case book, in which the oxymuriate had been successful after other means had failed, but I do not wish to trespass too much on the reader's indulgence ; I must, however, beg his patience a little longer, while I add the testimony of others, in favour of this remedy, to my own.

I received the following letter from my friend Mr. Goodall, whose extensive private and dispensary practice in the County Wexford, have afforded him ample opportunities of ascertaining its value.

" Wilmont, Nov. 16th, 1839.

" MY DEAR HAMILTON,

" Agreeably to your desire, I send you two cases of scrofulous ophthalmia, in which the use of the oxymuriate has been attended with success. I could send you many others, if desirable, in which a similar result had followed its use. I may say that since you first called my attention to it, in a case we saw together three years ago, I have been so satisfied of its superiority over any other means, that I have always resorted to it in such cases, and always with success.

" I remain, dear Hamilton,

" Yours sincerely,

" E. GOODALL."

CASE V.—Miss D., ætat. 12, fair complexion, brown hair, dark blue eyes, rather inclined to fat, and general health good, has had for the last three years an inflammatory affection of the left eye, which has been always greatly augmented by exposure to cold; the right eye has also been frequently inflamed. For these she has been under the care of several medical men, with only a slight and temporary benefit.

Jan. 1st, 1839. She presented the following state ; great lachrymation of both eyes, but more particularly of the left, intolerance of light, conjunctivitis of the right eye slight, of

the left severe, much inflammation of the eyelids. There are several small elevations of the conjunctiva round the left cornea, and on it may be seen several red vessels leading to little opaque spots.

Below and to the internal side of the left eye, there is an unhealthy looking ulcer about the size and shape of a sixpence; it is kept in a constant state of irritation by the flow of tears over it; it is of two years' standing, and she was told by her medical advisers that it was only to be cured by an operation, thinking it no doubt the result of disease of the lachrymal sac, in which opinion I was at first very much inclined to concur. After the application of first ten and then six leeches to the temples, and freely opening the bowels with the red bottle, on the fourth I put her under the following treatment.

Oxy. Hydrarg. gr. i.

Spirit. Vini Ton. ʒi.

Fiat mist. gr. xx. ter in die cum coch. ii. mag. ampl. mist. sequent.

Decoct. Cinchon.

——Sarsaparill. ʒ ā ʒ iii. ss.

Tinct. Cinchon. ʒi.

Hydriod Potass. gr. x. Fiat mist.

Citrine ointment between the eyelids at bed-time, and camomile stupes.

8th. Inflammation greatly subsided.

Repr. vin. Opii gr. i. in each eye every morning; a blister to the vertex.

12th. This morning she was so much better, that she pronounced her eyes to have been cured by a charm. I persisted in the treatment for a month, at the end of which time the eyes were perfectly well, and the ulcer healed.

Mr. Goodall's second case it is needless to give at full length; it is briefly as follows:—John C., ætat. 10, a delicate boy, came to him with strumous ophthalmia, of four years' standing; it was very acute at the time he came under Mr. Goodall's care. "The conjunctiva covering the ball and eyelids of both eyes

was completely covered with red vessels; several opacities on the cornea, which had lost much of its smoothness and lustre; profuse lachrymation, dimness of vision, and intolerance of light." In less than a month after he had commenced the use of the oxymuriate, during three weeks of which time he alone took the medicine, his only complaint was a little weakness of the eyes. It is interesting that in this case, before resorting to the use of the oxymuriate, Mr. Goodall tried purgatives, tonics, and blisters, without producing any change in the disease.

I am extremely happy to be able to add the testimony of my talented friend Dr. Hudson, of Navan, who writes to me as follows:—

" Navan, November 15th, 1839.

" MY DEAR HAMILTON,

" Miss E. had a tedious remittent fever six years ago, (at five years old ;) after this her eyes became frequently sore, and an ulcer formed on the cornea, which was treated more than once by applying a solution of the nitrate of silver. I saw and treated one of these attacks in June, 1835, and after near a month, I sent her to the sea-side, very little, if at all, improved. While there, she became worse, and was taken to you July 6th.

" The mother informs me that, under your treatment, the eye was cured in a fortnight. It has since remained quite well, with the single exception of a very trifling attack of ophthalmia, from cold, (not requiring the same treatment.)

" I was induced, from the great success of your mode of treatment, to try it in many cases which have since occurred to me. It has always succeeded remarkably well, and I could, if it were needful, produce the testimony of several of my friends here to the same effect.

" Your's, dear Hamilton, very truly,

" A. HUDSON."

My friend, Dr. Lees, Physician to the Dispensary for Children, has tried it extensively among the many cases, that

have come under his care, and I have his authority for stating, with equal success.

I trust I have now brought forward sufficient proofs, if not of the superiority of the oxymuriate above other remedies in strumous ophthalmia, at least of its very great value in the treatment of that disease. It would not be easy precisely to explain its mode of action; but it may be hoped that this will not be more objected to it than to bark in ague, or sulphur in itch: the physiological school of medicine, which has effected so much good, was faulty in being too ready to reject remedies whose action could not be rationally accounted for. To me, the oxymuriate of mercury seems to act as a tonic and alterative, and it is in the last especially that I regard it as superior to all other tonics, operating such a change in the scrofulous constitution as, I truly believe, not only cures the local disease, but fortifies the patient against a recurrence, relapses being infinitely rarer, after cases so treated, than by any other way I am acquainted with. In the most recent systematic authors* on diseases of the eye, I find no mention of its use as an alterative; it is therefore reasonable to conclude it to be unknown. Travers alone recommends, where the symptoms are acute, or the cornea opaque, calomel, blue pill, or the oxymuriate combined with opium, to slight *salivation*; but he conceives the benefit of those mercurials, so given, to depend mainly on the combination with opium, as the irritation of the mercurial given by itself, in sufficient doses for the purpose, is too great. Salivation is, I think, if possible, to be avoided; when it has occurred in my practice, though there has usually been decided amendment, I have not trusted to it, considering such improvement as not likely to be permanent, and have, after discontinuing the remedy for some days, resumed it in much smaller doses. Mackenzie praises its *external* application as a lotion; but his chief reliance is on the

* Travers, p. 259; Mackenzie, p. 391; Middlemore, p. 266; Morgan, p. 92; Lawrence; Scarpa, p. 176; Weller, French Translation, p. 191, vol. ii.; Guthrie; Veitch.

sulphate of quinine, which I have sometimes used successfully, but having often found it fail, and from my conviction of the superior efficacy of the oxymuriate, I have latterly rarely given it, except in a few instances to alternate with the latter, in very weakly children, and in this way I have found it of great use. Indeed, quinine had been previously tried in most of the cases where the oxymuriate was afterwards successful. He objects, generally, to the use of mercurials, and considering the debilitated habit of those labouring under this form of scrofula, the objection of this excellent practical writer to mercury, exhibited in the ordinary forms and manner, is doubtless well founded. When not injurious it is sometimes useless, as the following case shows :—

CASE VI.—Michael Baldwin, ætat. 26, residing at 7, Little Ship-street, became affected with strumous ophthalmia at ten years old, and continued so for three years, when he was much relieved by blisters and eye-drops, but not quite cured. At 15 he had a bad attack, which was also relieved, but the eyes continued weak. At 18 he had another severe relapse, for which he entered hospital, but left it unbenefited. He was next under the care of the late Mr. Conolly for five months, and got better, but the eyes were still weak. He then went to sea for a time and got perfectly well, and continued so till October, 1838. He applied to a medical gentleman, by whom, besides other treatment, he was salivated, but *without relief*, and he was obliged to discontinue his employment as a shoemaker. When he came to me his eyes exhibited the effects of the long continued inflammation, both corneæ being dull, their surfaces not smooth, and mottled with opacities, crossed by numerous red vessels; there was much intolerance of light, a good deal of dull pink vascularity of the sclerotic, and profuse lachrymation. By cupping to the temples, blisters, and purging, followed by the local use of the vin. opii. and ung. præcip. rub., and the internal exhibition of the oxymuriate, he got well. Decided benefit manifested itself in the first fortnight, but it was a long time before he was perfectly recovered, and there is still a slight nebula on the right cornea; but he follows his trade, and says

he has not been so well except when at sea. At one time, after apparent recovery, he had a severe relapse, but he has now been free from ophthalmia for more than a year.

I have also seen an unusual example of the occasional inefficiency of mercury to salivation in this disease, in a man who was under Sir P. Crampton's care in the Meath Hospital. While travelling through various parts of North and South America and Ireland, he had laboured under a strumous ophthalmia, and had applied to the different medical men in the places he was in at the time. He was *sixteen times* salivated, and always with temporary relief, but with as invariable a relapse. He was labouring under a salivation when he came under Sir Philip's care, and from the turbid appearance of the corneæ, and their great vascularity, inducing a state approaching to blindness, it was feared that the eyes were in a hopeless condition.

However, when the symptoms were very acute, I certainly have found, in a few instances, much benefit ensue from mercury pushed to salivation.

It will be seen from the cases given in this paper, that the treatment was never confined solely to the constitutional remedy, but that various local applications were resorted to. Such a combination I believe to be absolutely necessary, and that much may be done by judiciously changing those applications. In acute attacks, smart purging, cupping, or leeches to the temples, should precede the use of the oxymuriate; blisters on the top of the head or behind the ears, and in the more chronic form, a caustic issue on the vertex, are very beneficial, as also vin. opii. dropped into the eye, or a solution of the nit. argenti, of various strength; and when there is ophthalmia tarsi, dilute or undilute citrine, or red præcipitate ointment, sometimes even the combination of both succeeds, when either singly fails. Solutions of lead, zinc, &c., are often useful. To the natural objection that these and not the oxymuriate were the real agents of the cure, the answer is conclusive, that in all the cases I have adduced, most of these means had been tried, and had failed, till the oxymuriate was

given with them. When there is much organic change in the cornea, where it is very turbid and vascular, the greatest perseverance is necessary. The case of a man of the name of John Steevens, made a strong impression on my mind in proof of this necessity. He was under the Surgeon General in the Meath Hospital, seven years ago, and was chiefly committed to my care, as senior pupil at the time; subject from infancy to sore eyes; at 14 or 15 he was so bad, that he could only distinguish light from darkness, the former appearing dazzling to him; the corneæ were turbid and vascular in an extreme degree. A caustic was inserted in the vertex; blisters, ointments, and various drops were used; the bluestone was applied to the granular lids, but did not serve him; calomel and sugar were blown into the eyes, and he took the oxymuriate off and on for eight or nine months. Improvement very slow did, however, take place; and last November he came to the Meath Hospital, merely in consequence of a little weakness of the lids, but he was able to read.

It is entirely to Sir Philip Crampton that I am indebted for my knowledge of the utility of this medicine, and it was while serving my time as his pupil, that I had an opportunity of witnessing its effects; and subsequently in the South Eastern Dispensary, I had abundant opportunity of confirming the favourable impression I then received. He informs me that he learned it from Dr. M'Evoy, a surgeon, who practised many years ago in this city. That it should not be in more general use in the disease is certainly surprising. Sir A. Cooper, in his admirable lectures, praises it highly as a remedy in scrofula; but though specifying the various other local effects of that disease, says not a word of the strumous ophthalmia. The fact so well known of its forming the chief ingredients in the many anti-scorbutic nostrums of the quacks, would seem naturally to have led to its use where the eye was affected by scrofula, yet such does not appear to have been the result. There are two authors, however, who are its strong advocates.

One of these is Ware, and it is strange that his authority should not have led to its general adoption. The other is Van Swieten.

In the second volume of the Medical Observations and Inquiries, is a very interesting letter in Latin, from Baron Van Swieten to Dr. Sylvester, on the use of the oxymuriate in the cure of an opacity of the eye. He relates the first case that led him to discover its value was that of a man labouring under syphilitic disease, whose cornea was opaque, and had been so for many years. While giving the oxymuriate, he observed the opacity to disappear. Incited by this success, he tried it in the case of a young nobleman, who was blind in consequence of both corneæ remaining opaque after a badly cured ophthalmia, and with the best result; as after eighteen months' perseverance in the use of the remedy, with alternate purgation and blood-letting, whenever there was an accession of ophthalmia, the cornea became clear. He adds, "Thus it is clear that the human body can bear the use of this remedy without injury for a long time."

If the authority of these eminent men, that of Sir Philip Crampton, the cases here given, and the testimony advanced in its favour, should induce the reader to make a trial of the oxymuriate in the strumous ophthalmia, my object in writing this paper will be accomplished.

ART. XXVI.—*On the Hydrocyanoferrate of Quinina; a Febrifuge of greater Power than the Sulphate of Quinina.*
By M. DONOVAN, ESQ.

NOTWITHSTANDING the valuable febrifuge powers of sulphate of quinina, it is well known that it occasionally fails; and, unfortunately, in cases which most require its aid.

In such, the hydrocyanate of quinina has been used with good effects; but Signor Bertozzi, of Cremona, has shown that

when this salt is employed in the state of solution, according to the method of Signor Pezzina,* it is subject to decomposition. He has therefore substituted the hydrocyanoferrate of quinina; and its power over the worst forms of intermittent fever has been completely established.

Doctor Zaccarelli has prescribed this new medicine in a great number of cases, in place of sulphate of quinina. It is found to cut short tertian and quartan fevers; and, what is well worthy of the attention of physicians, it *has principally succeeded in cases where sulphate of quinina failed*. Doctor Carioli has confirmed the febrifuge properties of this salt.

The following is given by Bertozzi as the most economical process for obtaining it:—One part of sulphate of quinina is to be triturated in a glass mortar to an impalpable powder. A part and a half of ferruginous prussiate of potash, previously dissolved in six or seven parts of distilled water, is to be mixed by careful agitation, and the whole exposed in a flask to heat, stirring the mixture frequently, until it arrives at the boiling point. In proportion as the liquid becomes transparent, there is precipitated to the bottom and sides of the flask a substance of a greenish-yellow colour, having an oily consistence. Having then decanted the liquid portion, this substance is to be washed with distilled water, which will separate some sulphate of quinina that had not been decomposed, along with some other matters. Having accomplished the washing, and poured off the waters, the product is to be dissolved in very pure alcohol at 100° of Fahrenheit. The solution is to be filtered: the liquor which passes becomes muddy, and when evaporated, leaves a mass, confusedly crystallized in needles, the weight of which corresponds to three quarters of the sulphate of quinina employed. This is the *hydrocyanoferrate of quinina*.†

This febrifuge has been introduced into the new Codex Fran-

* *Gazetta Eclectica*, p. 71, 1832.

† *Journal de Pharmacie*, xix. 45.

çais, but the quantity of ferruginous prussiate of potash has been reduced to rather less than one-third of the quantity directed by Bertozzi.

In preparing the hydrocyanoferrate of quinina, I observed that when the ingredients were heated, the sulphate of quinina dissolved rapidly as the temperature rose towards the boiling point. In proportion as it disappeared, it was replaced by a magma of a dirty greenish yellow colour, which floated at top ; but when the liquid came to a boil, this matter melted into a liquid of an oily consistence, and then descended to the bottom. On cooling the flask, the matter in the bottom hardened into a greenish solid, which stuck to the glass. The water being poured off, the greenish matter was easily washed with cold water, and drained, it being scarcely soluble in water. Some alcohol being added, and heat applied, the mass readily dissolved. The solution being submitted to spontaneous evaporation, no crystals ever formed ; but after some weeks' exposure, a cake of pea-green matter was left at the bottom of the vessel, and a scanty crust of greenish white scales on the sides. This cake was softer than wax, and was flexible as well as ductile. It was drawn out into a thin transparent plate, and left for some days to dry in the air. At the end of this time, the matter was crisp and friable. The whole produce, which I obtained from the proportions of the Codex, weighed 783 grains ; the quantity of sulphate of quinina employed having been 1000 grains.

The hydrocyanoferrate of quinina, when in small fragments, is of a pea-green colour ; its taste is intensely bitter ; it dissolves in cold, but better in hot alcohol, and is precipitated almost entirely from the solution by water. In prescription, it would be an error to promote its solution in water by means of dilute sulphuric acid, as is done in the case of sulphate of quinina ; the salt would be decomposed by this acid, and the solution would become blue. It ought not to be prescribed with tincture of cinchona, and consequently not with infusion or decoction. The dose

given by Doctor Zaccarelli, was equal to three grains and an half troy, repeated according to necessity.

Although this febrifuge is precipitated by water from its alcoholic solutions, it separates in the state of so fine a powder, and remains so long suspended, that it will answer for exhibition very well in this state. The following formula will be found convenient :

℞ Hydrocyanoferratis Quininæ grana quatuor,
Spiritus rectificati drachmam. Solve.

Adde Aquæ, vel

Misturæ Camphoratæ drachmas septem. Misce fiat haustus, ut res nata sit, phialâ prius agitâ, sumendus.

In pills

℞ Hydrocyanoferratis Quininæ grana viginti quatuor
Mucilaginis gummi Arabici q. s.

fiat massa quam divide in pilulas duodecim.

These pills will be of a proper size, and two of them will constitute a dose ; to be repeated according to the discretion of the prescriber. I believe that the liquid form is preferable to the pilular, unless under peculiar circumstances.

It is a remarkable fact, that a medicine possessing febrifuge power superior to that of sulphate of quinina, should not have found its way into the practice of the physicians of this country ; this indeed is not the only instance, in which the contributions of scientific pharmacy to the healing art, have been neglected in the British Isles. My duty however terminates with submitting the article to the consideration of the medical public.

ART. XXVII.—*Sequel to DOCTOR HOUSTON'S Case of Fracture of the Pelvis, published in the eighth Volume of this Journal.*

TO THE EDITORS OF THE DUBLIN JOURNAL OF MEDICAL SCIENCE.

April 2, 1840.

GENTLEMEN,

I beg leave to forward to you, for publication, a farther report of the complicated fracture of the pelvis, already detailed in your valuable periodical, and regarding which, I promised to state the result at some future period.

I remain, gentlemen, your obedient servant,

JOHN HOUSTON.

The case here alluded to, and which may be still in the recollection of my readers, is that of John Fortune, whose pelvis was crushed between two waggons, passing in opposite directions. Consequent upon the fracture, there followed a sloughing of the urethra, and discharge of urine for a long period from the perineum. The fracture healed, after very protracted sufferings; but, after all inconvenience from this source had subsided, the patient was often in imminent danger of his life, from various urinary derangements. A gradual and unavoidable contraction of the aperture in the perineum, caused a diversion of the urine by new routes to the surface, and gave rise to various long and tortuous fistulæ: one of these fistulæ opened on the back, above the sacrum, others on the anterior part of the thigh; and, for twelve months, one or other of these channels, or, occasionally, that in the perineum, served as its only outlets; no part of it, at any period from the occurrence of the sloughs, being voided through the natural canal in the penis. When all hopes of recovery were given up, on account of the contracted state of the bladder rendering the tapping of that viscus impossible—the narrowed condition of the perineum from the falling

together of the bones after the fracture—and the impossibility of reaching the bladder by any of the sinuous passages. An incidental discovery of a small sac in front of the neck of the bladder, into which the urine entered before escaping through the other fistulous tracks, led to an operation which, in the end, proved successful. An incision, as for lithotomy, was made into the sac; the urine flowed from it freely, and continued to do so until the urinary fever and other symptoms of imminent danger had passed away; and then, by a variety of manipulations, as formerly fully detailed, the original canal of the urethra was opened up afresh, for it had become diminished by disuse, and a communication re-established between it and the bladder, which ultimately permitted the escape through it of the urine, in a natural manner. All the collateral fistulæ healed up, the man recovered his health and strength; and, after eighteen months' residence in hospital, during which he suffered as much as a human being could be supposed capable of enduring, he was discharged cured, and shortly after entered into active employment.

The discharge of this man from hospital occurred in April, 1834, making it now six years ago, a space of time, it will be conceded, sufficiently long for estimating the value of the services rendered to him: and I cannot but observe here, that he has not *himself, by proper temperance and regularity of living*, given fair play for the consummation of a permanent cure.

I saw him this day (April 2); he continues in the employment of the railway company, in whose service he was disabled. He is in excellent health; walks without any other inconvenience than that resulting from a slight shortening of the leg of the injured side; has got married, and become a father; and passes urine by the natural passage, in a full stream, and at the ordinary intervals of frequency. He has no urinary fistula whatever; and considers himself a perfectly sound man.

The continuance of the urethra in so perfect and open a state for such a length of time, and after so much loss of sub-

stance as it had suffered, is a result which I could not have anticipated; the more especially as the man, feeling satisfied with his own condition, neglected to comply with my request of being allowed to introduce for him, occasionally, a catheter.

ART. XXVIII.—*Observations on Stuttering*. By M. DU SOIT, M. D., of Moudon, Switzerland, who had been himself a Stutterer.

[From the *Gazette Medicale*, tome viii. No. 10.]

Stuttering results from a clonic or tonic Spasm of the Respiratory Organs—preventing the Action of the Will upon the vocal Apparatus—and it ceases whenever the Spasm gives way, and Respiration becomes regular.

MOST of the authors who have written upon stuttering, have sought for its cause in some defective condition of the organs of pronunciation, or in the faulty position of the tongue with respect to the palate and teeth. Thus M. Hervez de Chégoin endeavoured to trace stuttering to the absolute or relative smallness of the tongue; or to the thickness or shortness of the frenum, which, by limiting its actions, prevents articulation. He brings forward the cases of two stutterers, who had been cured by the division of the frenum. But the condition of these organs is similar in most stutterers; and even the admission of these causes could not explain the infinite variety of stuttering, and the influence which the affection has on the stutterer himself, so that we must consider these cases as exceptional. Others, with Sauvage and Itard, believe that the affection depends on debility of the tongue. Yet we find that all the other motions of the tongue and lips are performed by stutterers with perfect facility. Is it not then rather a state of spasm than debility, for if debility was its cause, how could the spontaneous cure of stuttering in advanced life be explained? Some have sought for its cause in the action of the brain on the

vocal muscles, an explanation which would be certainly just, were it not too vague.

In the article "Begue," in the "Dictionnaire de Medicine," Rullier says, "In the stutterer the cerebral action which follows the thought, and which excites the muscles, which are necessary for the oral expression of the ideas, is so impetuous, and is reproduced with such rapidity, as to exceed the possible measure of mobility of the vocal organs."

But to admit of such fertility of imagination, and such impetuous cerebral action in stutterers, is unjustifiable. I, for one, must declare, that I never experienced anything of the kind, and I know many stutterers, whose cerebral action is feeble, and who are certainly more distinguished for dulness than vivacity. This explanation would make us conclude that stuttering was, or should be, more common in women than in men, but the very contrary is the fact. Magendie explains stuttering by a defective state of the organic intelligence, vitiating the motions of the vocal organs, which at once obey the nervous system of the organic life and that of relation. Yet this explanation is as vague as the preceding one, and leads to no practical application. Finally, the explanation of Charles Bell, who regards stuttering as proceeding from a defect in the power of coordination of the actions which form the word, is liable to the same objections.

Let us now examine what happens to a stutterer when he attempts to speak, and here we shall distinguish two varieties, which may be considered as two degrees of the affection. In the first, which is the most slight, (*begaiement d'avant* of Malbouche, *labio-choreique* of Colombat,) the stutterer speaks with fluency, until it happens that at the end of an expiration he has to pronounce a word commencing with certain consonants, such as *b*, *p*, or *v*. Respiration then becomes embarrassed, interrupted, and panting, and convulsive motions, and even a tonic spasm of the lips accompany the effort to pronounce the word. At length he overcomes the difficulty, but always, as Malbouche has observed, after making an inspiration. In the second de-

gree, (*begaïement d'arrière* of Malbouche, *gutturo-tetanique* of Colombat,) the stutterer remains with his mouth open, utterly incapable of producing any sound, even when the word to be pronounced commences with a vowel. The face and neck swell, and the jugulars become distended. In some the state is rather tetanic, while in others it is more analogous to that of chorea. I know a case of this description in which the stutterer turns round and round, and throws about his arms like one affected with chorea. This shows the inaccuracy of Colombat's denominations, for in the species which he terms *labio-choreique*, the state is often tetanic, and in the *gutturo-tetanique*, the state may be one of chorea. Both varieties, however, are often united in the same individual. A stutterer in the first degree is often prevented speaking when the first word commences with some difficult consonant. The fear of not succeeding, renders his respiration gasping, and he becomes as mute as a stutterer in the second degree.

In both cases the stuttering ceases upon a strong inspiration, but if respiration is not performed with regularity, it will soon return with greater or less intensity, according as the respiration is more or less agitated, or the moral emotions interfere with volition. If we can now induce the stutterer to breathe regularly, to confine his respiration to a certain rhythm, the difficulty ceases; and if this constraint can be kept up in conversation, there will be no more stuttering. This is the direct result of the method of Serres.

It is evident that the essential element in the different species of stuttering is the tetanic or choreic state of the inspiratory or expiratory organs, which, in the first degree, renders articulation difficult, and in the second wholly prevents the emission of sounds. All that is connected with the action of the lips, tongue, and throat, is but accessory, and only constitutes varieties of the one affection. Finally, we have seen that in the different varieties of stuttering, we may stop it by a strong inspiration; that is to say, we prevent the spasm and irregular organic

motions of the respiratory organs, and regulate them by the cerebral action of the will. It was by this simple proceeding, pointed out to me by Dr. Lindt, of Berne, that I was cured at the age of twenty years, of a most severe stuttering. I believe also that the cure was assisted by gymnastic exercises, to which I devoted myself with great ardour, and which augmented the cerebral influence over the whole muscular system. It now only remains for me to show that all the modes of treatment proposed, and which their respective authors believed to be rational, are really empirical, because the explanation on which they are founded is false. They have only succeeded when, without the intention of their authors, they induced a regularity of respiration.

Let us commence with Demosthenes, who cured himself by declaiming on the sea-shore the verses of Euripides and Sophocles, as well as his own orations, while in his mouth he held small pebbles, which was an additional difficulty. Itard proposed the division of the frenum, and the exercise of speaking in a foreign tongue, but his method has had but little success. We have next M. Voisin, who recognised the spasmodic character of the affection, but added nothing to the treatment. Mrs. Leigh believed that stutterers kept the tongue too much depressed into the floor of the mouth, and imagined she could cure them by making them direct the tongue upwards; and states that by this method she cured 150 stutterers in three years. M. Malbouche, who brought her method to Europe, considered it very defective, inasmuch as he recognised no less than eleven various directions of the tongue, and hence proposed eleven different curative positions! But, as Magendie has remarked, these different positions are but theoretic subtleties, for stutterers may be cured who adopt any determinate position of the tongue, even by forcing its point into the opening produced by the removal of one of the molars of the lower jaw, of which M. Hervez de Chégoin has given an example. It seems probable that from want of exercise the tongue may become inactive in stut-

terers, and if so many authors have agreed on the importance of of a certain position of the tongue, it is that they have found advantage from exercising it, and rendering it more submissive to the action of the will. It is clear that the exercise of declamation, as practised by Demosthenes when he sought to elevate his voice above the sound of the waves, would tend to the same result; but on the other hand it is certain, that stutterers will not be cured by the exercise of the tongue, unless at the same time they regulate their respiration. And this has been done by M. Malbouche, who made his pupils inspire whenever they hesitated in their speech, although he only considered this step as accessory. I shall here give an example of the subtleties on which the theory of Malbouche is founded; *p* is classed among the labial consonants; but as stutterers find this the most difficult letter to pronounce, a circumstance opposed to the theory of Malbouche, who attributes the affection solely to the irregular motions of the tongue, he has actually placed *p* among the lingual consonants, although every one can satisfy himself that the pronunciation of *p* does not require any movement of the tongue. Mrs. Leigh insisted on complete silence, except during the period of exercise; and she observes, that stutterers having great determination of purpose, are more easily cured: I would add, because they have greater facility in mastering the irregular motions of their respiratory organs.

There are two methods yet to be noticed, which agree in this, that they act upon the respiration without, however, recognising this as the essential part of the treatment.

M. Colombat, besides his distinction of labio-choreic, and gutturo-tetanic stuttering, the inaccuracy of which we have already shown, distinguishes ten varieties of stuttering, which require as many different modifications in treatment. But if his theory is defective, his method leaves us little to desire, and is quite in accordance with the doctrines which we have propounded. It consists in the simultaneous employment of the three following methods:—

1st. The giving the tongue such a position as that its point shall be directed upwards and backwards.

2nd. The making a full inspiration at the commencement of each sentence, and repeating this frequently.

3rd. Marking the time, in speaking, by the action of the thumb on the index finger.

If these rules be observed, it is plain that stuttering cannot occur, and we need not be surprised at the great success of a method, which essentially consists in making the stutrer inspire at the commencement of each phrase, and marking the regular return of the inspiratory motions by the action of the thumb. This, despite of the errors of theory, has empiricism conducted us to the proper treatment of stuttering.

Finally, M. Serres d'Alais has suggested that a vigorous motion of the arm should accompany each emission of sound. He disregards the position of the tongue ; and this treatment is as successful as the preceding one. But neither Serres, nor Itard his reporter, have perceived that the effort is made during an expiration, so that the pupil must always have his provision of air to accompany the effort, and accustom himself to speak during expiration only. I may here again remark on the utility of gymnastic exercises, in augmenting the energy of the will and the action of the brain on the whole muscular system. The idea of M. Serres, that gymnastic exercises of the respiratory and vocal organs, constitute the true treatment of stuttering, is new, and of the greatest practical utility.

I have thus endeavoured to demonstrate that the most successful modes of treatment of this affection are in accordance with a just theory, and that they essentially consist in the proper regulation of the respiratory actions.

BIBLIOGRAPHIC NOTICES.

Observations on the Diseases incident to Pregnancy and Childbed. By FLEETWOOD CHURCHILL, M.D., &c.

ANOTHER volume has emanated from the pen of Dr. Churchill on the diseases of pregnancy and childbed, and we are happy to perceive that it is no way inferior to its predecessor in the mass of information which has been accumulated, while it has considerably the advantage of it in the style in which it has been got up; more attention has been paid to the paper, type, and other etceteras of publication; and the present volume has not only utility to recommend it, but it is sufficiently ornamented for the most elegant medical library.

The notes and references are as abundant in the present, as in the former work, and would appear to us almost too numerous, did they not supply a desideratum, which in other works of the kind was wanting. Dr. Churchill's "Observations" are not merely valuable in themselves, but we find the experience of almost all writers on his subject, collected and arranged in such a manner as to enable the reader to take up any particular section on disease, and follow it through all the authorities who have written upon it. The value of Dr. Churchill's work, therefore, is enhanced by becoming a most useful book of reference.

We very much approve of the division which Dr. Churchill has made of the diseases of pregnancy, as it at once points to the principal causes, to which not only the diseases, but the signs of pregnancy, may be referred, viz., to that powerful influence which is exercised over all other functions in the animal economy, by the sudden activity of one hitherto dormant, one to which the nervous energy is especially directed, an effect which each organ acknowledges by the sympathetic irritation which is produced, and the mechanical effects produced by the increasing weight and size of the gravid uterus.

The diseased condition and constitutional disturbance produced by these causes, together with the local disorders of the

generative organs, embrace all the diseases incident to pregnancy. Dr. Churchill accordingly classifies them into,—1st, local diseases of the sexual system; 2nd, diseases arising from sympathetic irritation; 3rd, diseases arising from mechanical causes. Under the first division are included “*œdema of the labia*,” “*pruritus vulvæ*,” “*vaginal leucorrhœa*,” “*menstruation during pregnancy*,” “*discharge of watery fluid from the vagina*,” “*excess of the liquor amnii*,” “*rheumatism of the uterus*,” and “*hysteritis*.” The chapter on menstruation during pregnancy will illustrate the value of the work: on this disputed point Dr. Churchill observes.

“It is well calculated to excite surprise, if not incredulity, to find a function depending upon ovarian influence, and ordinarily performed by the lining membrane of the body of the uterus, taking place apparently when the cavity of the womb is lined by decidua, and occupied by the ovum. However strange it may appear, the cases on record are too numerous and too well authenticated to leave us in doubt, that a discharge resembling the catamenia in colour, quality, and periodicity, does not unfrequently occur during gestation.”—p. 33.

Dr. Churchill then quotes authorities in which

“Some females are stated to have menstruated once or twice after conception, and that the discharge then ceased, (Mauriceau, Puzos, Stein, Desormeaux, Johnson, Belloc, Van Swieten, Frank, Chambon, Gardien, Capuron, Roederer, Beck, Dewees, Blundell, Gooch, Kennedy, Montgomery). Again, cases are on record where the discharge did not merely happen once or twice, but persisted four, five, or six months, or even during the whole period of gestation, (Mauriceau, Dewees, Burton, Heberden, Hosack, Francis, Gardien, Velpeau, Blundell.)

Dr. Churchill had seen three or four cases of this deviation from ordinary menstruation.

“Still more remarkable and rare are those cases where the catamenia appear for the *first time* during pregnancy, (Perfect, Reid, Velpeau,) or only during gestation, (Daventer, Dewees, Baudelocque,)”—p. 34.

Such a host of authorities is sufficient, but at the same time necessary, to overcome the negative opinions of men so experienced as Denman and the late Dr. Hamiltom of Edinburgh, as well as that it is in seeming contradiction to the most generally received opinions, as to the source of the menstrual discharge being the internal surface of the uterus. Dr. Churchill alludes to the different explanations given of this anomaly.

“ It has been said to proceed from the lower portion of the uterine cavity, before the ovum is sufficiently large to fill it, or from the vessels of the cervix whether internal or external, or from the vaginal mucous membrane.”—p. 38.

Dr. Churchill does not see how the first opinion can be in accordance with the fact of the canal of the cervix uteri being blocked up with mucus shortly after conception, or with the integrity of the membrana decidua.

The second explanation appears to him to assign too limited a source to the discharge, though he questions not that the mucous membrane covering the cervix may share with the vaginal mucous membrane, the vicarious function.

“ This view is rendered probable by the circumstance that one of the patients, from whom Dr. C. Johnson, of this city (Dublin,) removed the entire uterus, menstruated after the operation.”—p. 39.

He attributes the pathological cause of this deviation to misplaced ovarian influence, and the necessity of periodic discharge, which gives rise to the varieties of vicarious menstruation.

The chapter on rheumatism of the uterus is also interesting, as it is an affection but little noticed here, and if unattended to or misunderstood, may lead to serious errors. If it occur during pregnancy, abortion may be the result, if not correctly treated. The distressing motions of the child often has its cause in rheumatism, and the false pains which precede labour may sometimes be traced to the same source; even during labour the pains are often greatly increased in severity, and their order deranged by this affection. Its most frequent cause is exposure to cold, very properly attributed by our author to the peculiar dress of females.

“ It has been especially noticed (says Dr. C.), that the figure of pregnant females, by projecting the clothes from the lower part of the body, is a peculiar cause of cold.”

We shall give our author's sketch of the symptoms:—

“ If the attack be mild, the patient will complain of sudden shooting pains in the region of the uterus, coming on in paroxysms, with intervals of more or less complete ease. In some cases the spasm is limited to a small space, in others, it effects the organ generally. If it be severe, it may be preceded by headach, uneasiness, giddiness, and general irritability. Suddenly, without apparent cause, the patient will be seized with severe pain in the region of the uterus, of a spasmodic character, with distinct contractions of the uterus, and so much suffering during the whole of their duration, as will distinguish

them from real labour pains." "It does not follow, however, that the expulsive efforts thus inauspiciously begun will continue, though if neglected, abortion or premature delivery has sometimes resulted." "When the affection (says Dr. C.) occurs during parturition, the pains are as it were arrested; they become tedious, ineffective, and often sudden and interrupted, occasioning more suffering than usual. The patient is hot, thirsty, and irritable, unable to remain long in one posture; the pulse quick, and either full soft and undulating, or small and hard. The uterus becomes very tender, the weight of the bedclothes occasioning much pain. The sensibility may extend to the neck, rendering examination very painful. During a paroxysm the uterine tumor feels much harder than usual. If the case be left to itself, we shall find the pains become weaker, and even entirely suspended for some hours. If the patient should fall into a perspiration and sleep, the natural pains will recur, and the delivery terminate favourably."—p. 58.

We would also direct the reader's attention to the chapter on hysteritis, or inflammation of the womb, occurring during pregnancy, which, though a short one, contains valuable references to English and foreign authors on the subject, as well as some important facts. To this cause has been attributed both ruptures of the uterus during parturition, and adhesions of the placenta. Of the former of these,

"Dr. Gason, of Enniskerry, informed me (Dr. C.), that he has met with three cases of inflammation attacking some part of the womb during pregnancy, and that in these three cases, rupture took place during labour, in the *exact spot* previously diseased."—p. 63.

A case also quoted from Mr. Renton's paper on "Adhesion of the Placenta to the Uterine Surface," in which a woman in the early months of pregnancy having received a severe kick in the pubic region from one of her children, symptoms of abortion supervened, followed by inflammation; by active treatment these symptoms were relieved, but after delivery at full period, the placenta was found to be adherent.

"On examining internally, it was discovered, that about one-fourth of its (the placenta's) lower portion was detached, and the remaining part adhered, not closely and intimately, but by means of detached bands from below the middle, along the anterior wall of the uterus, which was puckered transversely, and very irregular, forming a striking contrast to the posterior side, which was uniformly smooth and free from contraction, firm, and greatly thickened." "The uniting bands felt like dense cellular membrane, and of the consistency of those adhesions by which the pleura pulmonalis is connected to the pleura costalis after inflammatory attacks."—p. 64, note.

The section on disorders from sympathetic irritation, include toothach, ptyalism, capricious appetite, nausea, pyrosis, hæmatemasi, constipation, diarrhæa, jaundice, &c. &c. The disorders of the circulating system next follow, palpitations, hæmoptysis, dyspnœa, &c.; and lastly, those derangements of the nervous functions which give rise to symptoms so distressing to the pregnant female, headach, sleeplessness, hypochondriasis, &c., and sometimes call into action the more dangerous attack of convulsions. In his account of these diseases we cannot say that Dr. Churchill has added to what is already known upon the subject, but he has brought into light much that has been forgotten. Amongst the records of the older writers are many curious facts, and some not a little amusing. We have always been accustomed to expect among pregnant females many instances of capricious appetite, and the variety of tastes displayed at this period, is a matter of ordinary observation; an unusual desire for salt, ginger, pepper, chalk, and ashes, especially amongst those who have been the victims of hysteria, is not a uncommon result of pregnancy, however difficult it may be to explain. But we must confess, that until we read Dr. C.'s work, we were not aware that ladies at this interesting period were inclined to cannibalism; strange as it may seem, on the authority of Roderick a Castro, who did not practise in New Zealand, Dr. C. states such to be the fact.

"Roderick a Castro relates a case of a woman who took a fancy to a bite of a baker's shoulder, nor would she be satisfied until the baker's consent was purchased."

Nor is this a singular example, another still more extraordinary instance is mentioned by Langiers, of a lady who took a new mode of indulging her taste for her husband, she determined to eat him; "and to gratify herself, she killed him, and having made a meal of part, *she salted the rest*."—p. 79. We hope for the honour of the sex that these are some of the cases which "are doubtless fabulous;" besides, that in such anthropophagic longings, it may be thereby said that the remedy is worse than the disease.

Dr. C. has well detailed all the different plans of treatment for those distressing and most unmanageable attacks of nausea and vomiting, and justly concludes that "the mere enumeration of the various modes of treatment is a proof of the difficulty of combating the disease. "In some cases we shall fully succeed, in others afford temporary relief, but *in many* utterly fail."—p. 99. We would be inclined to say, *in most*: with the exception of general depletion, the remedies usually adopted are those which are useful in allaying primary irritation of the gastric

mucous membrane ; and it is very questionable, whether they are in the least degree serviceable in that secondary irritation which is produced by sympathy with the uterus ; perhaps if our attention were directed more to the latter, if we sought rather to remove those causes which disturb the healthy performance of the function in which it is engaged, whether they arise from an over excited circulation and neglect of the bowels on the one-hand, or from a deficient energy in the constitution on the other, we would not have to record so many failures. The perusal of the different means of relief for this harassing affection and their result, we must say, seems to us very like the consequence of beginning at the wrong end. There are instances, however, in which what commenced from sympathy terminates in producing actual disease, the stomach may ultimately become inflamed, and will require corresponding treatment ; and again, the constitution of the patient is so unequal to the new demands made upon it, that she will experience no relief from the best directed treatment. In such cases, the induction of miscarriage is our only resource. Dr. C. has given us in support of a practice apparently bold, the experience of Denman, Merriman, Blundell, Davis, Ashwell, and Burns ; and justly observes,

“ These authorities and cases will, I think, be admitted as fully bearing out the opinion I have expressed of the propriety of this operation, as a last resource in this disorder.”—p. 102.

We shall not dwell on the various disorders from sympathetic irritation, which are all treated by Dr. C. in the same lucid manner, but we cannot pass over a case related by Dr. C. to show the effect of strong mental impression on labour. In his chapter on hypochondriasis, alluding to the fearful anticipations of some patients retarding labour, he says,

“ A striking instance of this occurred in my own practice. The patient was rather past the middle age, and was pregnant with her first child. Her mother died of uterine hæmorrhage, after the birth of her eleventh child, and she had been with several friends whose labours were unfavourable. This produced such an impression on her mind, that from the commencement of her pregnancy she had set it down as an indisputable fact, that she should die during her confinement, and accordingly she arranged all her affairs with this view. Nothing that I could say had any influence upon this conviction. For some hours after the commencement of her labour, the pains continued regular and effective, but every hour that passed convinced her of the truth of her prognostications ; until, at length, her mental agitation, as might be expected, diminished both the force and frequency of the uterine contractions, and the labour was not completed until *twenty hours* from its commencement. The placenta was im-

mediately expelled, and the principal danger she feared was over; but, unluckily, she remembered her mother's case, and I was startled by her calling out, 'Now, Doctor, the flooding.' I examined, but found no more discharge than usual; but nothing would satisfy her. Her fears became so acute that she worked herself up into a frenzy, and became quite delirious, in which state she remained for an hour, and then was restored. She has been confined a second time within these few days, and though she was very fearful, her mind was more tranquil than previously, and in consequence the labour was perfectly natural, and completed in five hours."—p. 153-4.

We find the subject of "nervous shock" more fully treated in the second part of Dr. Churchill's work on the *Diseases Incident to Childbed*. Dr. C. has given some chapters on the management of puerpural females, and "on certain variations for ordinary convalescence," one of which is this depression of the nervous energy. Dr. C. says,

"1. The nervous shock may be very severe; in these cases the patient complains of great exhaustion; the senses are either unnaturally dull or morbidly acute; the breathing is hurried and panting, and the accordance between the respiration and circulation is broken. The aspect of the patient is that of suffering, anxiety, and oppression. The pulse may be either very slow and laboured, or unusually rapid, very small, and fluttering. There are many cases, however, where the shock, though far from being so severe as in the case I have supposed, is quite sufficiently so to excite the fears of the medical attendant. Reaction is long before it occurs, or it may take place imperfectly, or excessively, and the patient remain for some time in a very weak condition."

"Under proper treatment the patient will gradually recover from this state of exhaustion or collapse; unless the shock be excessive, and then death will supervene in a few hours. I have seen several cases of this kind; in one case the labour was tedious, but terminated naturally; two others were instrumental deliveries, but in none, where a post mortem examination was obtained, was there *either injury or disease discovered*."—p. 259.

In addition to these remarks, are some very useful observations on the variations in the pulse, state of the uterine system, lochia, &c., during convalescence, most of which appear to be derived from his personal observation, and in this respect is an exception to Dr. C.'s ordinary mode of treating his subject, collecting and putting forward the opinion of others, as if to encourage the advance of his own. But if we were to select a chapter which would give the reader an idea of the nature of Dr. Churchill's work, as well as of the labour which he has bestowed upon it, we would direct attention to his history of that "*vexata questio*," puerpural fever. He has traced its literary genealogy

from Hippocrates and Avicenna, through every author who had ever written upon it, down to Dr. Ferguson, to whom, with Dr. Lee, Dr. C. "would especially acknowledge his obligations" for the information they have afforded him. Having made an analysis of the facts and opinions of authors, Dr. C. concludes :

"From the preceding slight sketch, it is evident that the disease prevails more extensively and is more virulent in hospitals. It is every where more frequent among the lower classes than the higher. In Dublin this is even more remarkably the case than in London. That the cause of the prevalence in lying-in hospitals is the number of patients in a ward, the want of proper ventilation, and the too rapid succession of fresh patients, before the wards have been properly cleansed, is rendered almost certain by the success which has followed attempts at remedying this evil.

"These four points, isolation of patients, cleanliness, ventilation, and allowing the ward in which the disease has appeared to be idle for a while, are the chief means of guarding against the disease in hospitals; and in private practice we can do little more than has been laid down in the Rules for the Management of Lying-in Women."—p. 298.

In the same manner as Dr. C. has given the history of the diseases, so we might say he has given its geography. He has arranged in a tabular form all the epidemics which have been recorded, the date and place of their appearance, the author, and the local affection which accompanied it. The commentary of the author is one in which we so entirely agree, that we must be permitted again to quote from his work.

"An examination of the foregoing table will render it no matter of surprise that authors should differ as to the pathology of this affection; and, as each appears to have regarded his own experience as a standard for all, we cannot wonder at, though we must ever regret, that various and bitter controversies should arise in consequence."

Dr. C. then enumerates all the different theories, and the authorities for each, "referring the reader to the various sources of minute information already quoted." We fear, however, that the reader would find it a hopeless task to determine the dispute amid such an array of names, marshalled, too, in fighting order, under the different opinions which they take as their standard. It is more important to determine the characters of the fever under each of the varieties which have been described, and this has been done very judiciously by Dr. C. He has given very clear descriptions of the fever, accordingly as peritonitis, hysteritis, uterine phlebitis, &c. &c., predomi-

nate. In making the local affection the basis of his arrangement, Dr. C. follows the plan adopted by Drs. J. Clark and Lee, "as at least developing most strongly the essential facts of the disease." We are happy to find that Dr. C. has given this explanation, and that while he gives full value to the influence of the local inflammation on the fever, he does not seem inclined to go to the length of—

"Banishing entirely from medical nomenclature the terms *puerpural* and *child-bed fever*, and to substitute that of *uterine inflammation*, or *inflammation of the uterus and its appendages*, in *lying-in women*."—(Lee.)

We shall not here enter into a discussion on this question, and thereby add to the ink-shed already spilt upon it. But we would simply express our dissent from the doctrine that the peritonitis which accompanies puerpural fever, and the ordinary peritonitis of lying-in women, are in any respect identical, or that they can be expressed synonymously.

Dr. Churchill has treated in an equally able, but not in quite so elaborate a manner, rupture of the uterus, vesico-vaginal fistula, miliary fever, phlegmasia dolens, &c. &c., and has succeeded in bringing out a work which reflects the highest credit on his industry and research. We could wish he was not so tenacious of infringing on the language of the authors he has quoted. The frequent insertion of their names in the middle of paragraphs, make his sentences limp, and as the name alone of the authority is given in many places, without the full reference, it is of no other use than to prove the Doctor's integrity. It would also have been desirable to have avoided short chapters. Tooth-ache and cough are hardly entitled to the dignity of being considered apart from salivation, dyspnoea, and other affections of the same organs, which, if united under one head, would make one respectable chapter in place of two or three, which are continued in little more than a page. These are faults of minor importance, and easily corrected; and in conclusion, we would strongly recommend Dr. C.'s work to students in midwifery, as a valuable text-book in the class of diseases of which he treats.

The Intimate Structure of Secreting Glands. By JOHN MULLER, M.D., Professor of Anatomy and Physiology in the University of Berlin. With the subsequent Discoveries of other Authors. By SAMUEL SOLLY, F.R.S.; Lecturer on Physiology, and on Comparative Anatomy, at St. Thomas's Hospital, London. Octavo: pages 166. BUTLER, St. Thomas's-street, Southwark.

Dr. MULLER is one of the most celebrated physiologists that the present, or any preceding age, has produced. The foundation of his fame was laid by the present treatise, which was first published about ten years ago. In its original form, however, it extended to greater length, and was clothed in the Latin language; and Mr. Solly (already favourably known to the medical profession by his work on the brain), has rendered his countrymen an acceptable service, not only by divesting it of its foreign dress, but also by freeing it from foreign diffuseness, and by reducing it to those condensed and convenient dimensions, in which an Englishman delights.

The volume consists of an introduction, prefatory remarks, fifteen books, and an appendix. The books are devoted to the following subjects:—1. Simple Cutaneous Follicles. 2. Intestinal Glands. 3. Peculiar Excreting Glands in certain Animals. 4. Glands appended to the Organs of Generation. 5. The Mamma. 6. Glands Subsidiary to the Organs of Sense. 7. The Salivary Glands. 8. The Pancreas. 9. The Liver. 10. The Kidneys. 11. The Testicles. 12. Summary of Anatomical Observations on the Intimate Structure of Glands. 13. Classification of Glands. 14. Glands in the Embryo. 15. Physiology of Secretion. The Appendix contains Mr. Owen's Researches on the Termination of the Urinary Ducts; Dr. Davys on the Male Organs of some of the Cartilaginous Fishes; and those of Boyd, Bischoff, and Purkinje, on the Mucous Membrane of the Stomach. The work, which is "got up" in handsome style, is illustrated by four plates, and several woodcuts.

Researches on Syphilis, as it occurs in Lithuania; with Observations on the Communicability of the Secondary forms of the Disease. By Dr. SCHNUHR, Physician to the Hospital at Gumbin.

THE peculiarities exhibited by this disease in Lithuania, have been ably delineated by Dr. Schnuhr, and confirmed by Dr. Albers, as well as the treatment without mercury, during the

years 1836-7. These papers appeared in the *Medicinische Zeitung*, in the 50th and 51st numbers of its sixth year. Again, we find the same subject treated of in the 17th number of the same work for 1839, by Dr. Schnuhr. We will give a very condensed account of this paper.

There were treated 310 syphilitic patients, 183 of whom were males, and 127 females, both in private practice and in the District Hospital of Gumbin, from the 1st of November, 1837, till the 1st of November, 1838. There were infected amongst these:

- (a) With broad condylomata, the greatest number of which were on the back, low down on the anus, on the labia pudendi majora, on the scrotum, in some persons on the brow, the hairy scalp, the angles of the mouth, the axilla; 12 men, 67 women, 10 boys and 8 girls under 15 years of age; total 97.
- (b) With pointed condylomata; in the men on the glans and prepuce; in the women, on the labia minora, on the entrance to the vagina, and in the vagina itself; 4 men and 8 women; total 12.
- (c) With ulcerated chaps (rhagades) of the angles of the mouth and anus, 1 boy of 4 years, 3 infants at the breast, (two boys and a girl,) total 4.
- (d) With ulcers of the mouth and jaws (primary). In the greater number there were ulcers of the palate, of the posterior wall of the pharynx, some of which were superficial, and some deep, next to these, enlargement of the amygdalæ of the soft palate and uvula, caries of the nose and palatine bones much less frequent than formerly, though in some cases occurring with destruction of the uvula and soft palate; 12 men, 36 women, 5 boys and 3 girls under 15 years of age; total 56.
- (e) With ulcers of the mouth and cavity of the jaws (primary), and broad (secondary) condylomata; 19 men, 27 women; total 46.
- (f) With ulcers of the organs of generation (primary); in the males on the glans and prepuce, in two cases on the root of the virile member, and on the scrotum; in the females, on the labia majora and minora, the entrance to the vagina, and, in some cases, in the vagina; 21 men, 14 women; total 35.
- (g) With eruptions, 10 men, 7 women; total 17.
- (h) With gonorrhœa and fluor albus, 12 men, and 8 women; total 20.
- (i) With buboes, 6 men and 1 girl; total 7.
- (k) With inflammations of the bones, tumours of the tubular bones, nocturnal pains in the bones, 4 men, 2 women; total 6.
- (l) With (secondary) ulcers on the extremities, along the tibiæ, on the bones of the forearm, in the mouth and jaws, on the hairy scalp, in the face (lupus), 5 men, and 4 women; total 9.
- (m) With general syphilis, 2 men, and 3 women; total 5.

62 of these 310 patients were treated in private (55 men
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and 7 women). The remaining 248 in the district hospital. The majority of those affected with primary syphilitic ulcers, with gonorrhæa, and buboes, occurred in the private practice. There were only 2 men and 1 girl affected with bubo received into the hospital at Tilsit.

This review of the past year offers a striking similarity in the forms of syphilis observed, to those which were remarked in the preceding years. There was an increase of primary ulcers of the genitals, but the condylomata and ulcers in the fauces, formed, as formerly, the majority of cases.

This year it was again remarked that local affections in this country were very tedious; cases neglected to an extraordinary degree were received into the district hospital, yet there were only 5, out of 248 patients, found affected with general constitutional symptoms; and in private practice not one.

The communication of infection is stated to have occurred in other ways than by connexion or impure intercourse; that such was the cause could only be proved in the list headed *a*, in the cases of 16 women, and girls above the age of 15, and in 8 men; likewise under the heading *b*, amongst those patients with pointed condylomata, and in *f*, *h*, and *i*, direct intercourse could be proved in few cases; and examination of those cases received into hospital, proved that after intercourse, the form of disease was the same as that with which the primarily diseased person was affected.

Of 73 persons affected with broad condylomata, the greater number stated that they had dwelt with persons similarly affected, or had been in close connexion with them; and some of those persons had been treated for this disease in the hospital. In 12 patients it could be proved that they had been affected earlier with ulcers on the genitals, so that in these the affection must be regarded as secondary. Many of those affected had passed the night with persons who had been cured of broad condylomata of the anus and genital organs; yet amongst these persons, in very few instances, could sexual connexion be assumed as the cause of the infection, in proof of which, amongst those persons were found undeflowered virgins, girls under the age of puberty, old men, and children.

On the other hand, notwithstanding a very critical examination being instituted amongst the hospital patients, under the head *d*, with ulcers of the mouth and fauces, we were not able to discover in what way the infection had been caused. The parts of generation in most of the virgins were free from cicatrices, and proof was wanting of any syphilitic disease having existed previously in the genitals; proof did exist, however, that in

many cases these persons occupied the same dwelling, and were much in the company of persons affected with ulcerated throats, or some other form of syphilis, and were servants in many cases, who used the eating and drinking vessels of those persons diseased, as also their tobacco pipes, without sufficient care in properly cleansing them. In many of those persons there was a manifest scrofulous complication, but in the greater number, the syphilitic character of the ulcers was plainly developed.

The infants under caput c, and the boy, belonged to four families of the poorest class, which dwelt on the plains, and were infected by their parents. The mothers of these children were affected with broad condylomata of the anus and of the genitals, one of them with condylomata on the forehead, hairy scalp, and axilla. Two of the fathers of these children were healthy, although they lay along with their children and wives, who were exceedingly dirty women, and by whom the disease was totally neglected. The disease was communicated to two of these families by a servant maid, to the third by the father, and to the fourth by the mother. Of the 18 children seen affected with broad condylomata, 11 belonged to these families.

The records of last year prove that the glandular system in Lithuania is rarely affected by syphilis. The same remark holds good during the present year.

The increased number of primary syphilitic ulcers which were treated this year, is to be accounted for by the great increase of intercourse with the large manufacturing towns and sea-ports of East Prussia, where this form of syphilis is abundant, and has lately much increased. The smaller number of these cases occurred in the hospital practice, whilst the greater was treated in private, amongst persons belonging to the higher classes.

Ricord, in his practical work, enumerates broad condylomata amongst the secondary symptoms of syphilis, and deems it a sign of constitutional contamination. He states chancre to be its constant and regular forerunner. These mucous tubercles, as Ricord calls them, or broad condylomata, occur with secondary symptoms, and agree with them in the circumstance of succeeding to chancre, but are not capable of being communicated by inoculation. Now, although this expression of opinion of Ricord's be grounded on very great experience, still I am only willing to grant that these condylomata often appear as secondary symptoms, transmit themselves hereditarily, and moreover are capable of communication; and frequently in this country primary condylomata appear, a circumstance I have often

observed. It is very difficult, as Ricord asserts, to distinguish broad condylomata which have remained superficial, and have passed into pustules, or become ulcerated, from chancre. In another part of his work, he denies this difficulty, and asks "if it be possible for any one who has once seen it, to mistake the well-marked mucous tubercle?"

Ulcers are frequently formed by friction, or scratching near or around the condylomata, but these never mark their characteristic appearance, even when they are very close on the posterior part, and form the *square condylomata* of Fricke. I have never remarked, although this form of syphilis is very common here in all its varieties, "that the broad condyloma was a chancre in the situation, and in lieu of the additional prominence and tumefaction." Ricord thinks that this mistake might be the more easily made, as the apparent primary cases occurred in greatest number in women and children, where the chancres which had preceded them might have remained unremarked or concealed, and the period at which the patient came under the cognizance of the physician might be farther or nearer, as it happened, from the time of infection. Here, however, numerous cases of broad condylomata occurring in men have been since contracted from sleeping with other men, or with their own children, who were suffering from this affection, but who had no trace of any other kind of ulceration on the thighs, back, or other parts of the body. I will not deny that it is possible that a primary chancre in the vagina might have healed without being noticed, and might have been the cause of broad condylomata being developed afterwards, and that such condylomata might be regarded as primary. But in the greatest number of cases this has not occurred, as, for instance, where they appear in children, and in girls as yet undeflowered; yet in such subjects I have seen them on the back, thighs, belly, breast, angles of the mouth, and in the axillæ, sometimes single, at others confluent, possessing an hemispherical form, and a tolerably firm consistence. Ricord states that the broad condyloma cannot be communicated by inoculation, because it is a secondary symptom; however, it is contagious; and that he assumes such to be the case, is proved by his having stated that when it is communicated to another individual at the period of the inoculation, quite different specific contagious symptoms are generated.

The vehicle which contains the syphilitic virus in the broad condyloma, is undoubtedly the secretion which is separated from it; for daily experience demonstrates, that when these tumours are allowed to remain in contact with the sound skin, they cause

similar condylomata to be produced. This is easily seen when one of these tumours is situated on the inner surface of the thigh, the scrotum, or on the labia pubendi majora; for in such instances the parts which are opposite and frequently in contact, become similarly affected. I cannot, therefore, concur with Ricard in the opinion, that these broad condylomata are only secondary symptoms; as far as my experience goes, yet I must confess, that his work on syphilis is one of the most valuable which has ever appeared. In the sentiments expressed by him, with respect to the administration of mercury, where, he says, "in the present state of our knowledge, it is impossible to define too accurately the cases in which mercury may be useful or mischievous," I fully concur, though I do not in all.

The treatment of syphilis without mercury has not yet been adopted by all practitioners. The Committee named by the Medical Association at Lyons, to experiment on the nature of syphilis, proved that it could be radically cured without the administration of that medicine, but expressed an opinion, that secondary symptoms occurred more often after such treatment than when mercury, combined with diaphoretics, had been employed. In France, the mercurial treatment is still very much confided in, notwithstanding the non-mercurial treatment recommended by Broussais and his followers. Amongst our surgeons, also, it is difficult to inspire the belief that the disease can be cured radically without mercury, their general belief being that it is the specific for syphilis. No doubt this medicine possesses a power of exciting the secretions, and an alterative action, which may be of use, and which, after the ordinary rules of therapeutics, may cure syphilis as well as any other disease. Besides, experience tells us that the primary symptoms of syphilis can get well of themselves, without any treatment, and under the most unfavourable circumstances; and the diagnosis of primary ulcers is so dubious in many cases, that Hennen, Handschuch, and other writers, were disposed to deny any decided character to syphilitic ulcers. Fricke produced artificial ulcers between the glans, penis, and prepuce, by introducing a bit of corrosive sublimate; as also between the carucles and nymphæ, which had exactly the same appearance, and ran the same course as venereal ulcers. In addition to all this, the action of mercury, even in the smallest doses, can never be reckoned on, producing sometimes the most violent symptoms and effects. From all these reasons, the conviction must arise that a non-mercurial treatment is the best.

I shall now give the results of non-mercurial treatment of the cases which occurred to me during the last year.

From the 1st of November, 1837, to the 31st of October, 1838, there were 39 syphilitic patients, 16 men and 23 women treated in the hospital at Gumbin. Amongst these were 3 boys and 3 girls under 15 years of age.

- (a) With primary ulcers of the genitals, 4 men, 2 women; 6. The ulcers in three of the men were on the part of the glans covered by the prepuce, in one accompanied by paraphimosis, in another by phymosis; in the third, a very dirty fellow, there were large ulcers on the root of the penis, besides those on the glans and prepuce. In the women the ulcers were situated upon the labia pudendi majora et minora.
- (b) With broad condylomata, 3 men, 7 women, 1 boy and 2 girls under 15; 13. Situated in the men on the scrotum, and in the neighbourhood of the anus. In 1 woman on the forehead, hairy scalp, and about the anus; in the rest on the labia pudendi majora, and about the anus; in the children on the thighs and about the anus. In two of the women the disease was so much neglected, that the condylomata had grown nearly an inch thick along the labia.
- (c) With pointed condylomata on the glans and prepuce, 1 man.
- (d) With ulcerated fissures of the angles of the mouth and anus, 2 infants and 1 boy.
- (e) With primary ulcers of the mouth and fauces, 3 men, 6 women, and 1 girl under 15. In 2 of the women the uvula was destroyed, and there were holes in the soft palate; in the others there were ulcers on the amygdalæ, and on the posterior surface of the pharynx.
- (f) With secondary ulcers of the mouth, caries of the palate and nasal bones, and broad condylomata of the organs of generation and anus, 1 woman.
- (g) With gonorrhœa and fluor albus, 1 man and 1 girl.
- (h) With skin disease, 1 woman.
- (i) With ulcers on the upper and lower extremities, breast and neck, 1 woman.
- (k) With general syphilis and hectic fever, 1 woman.

Beside the above-mentioned patients, 11 men were treated in private practice, with syphilitic ulcers of the glans and prepuce, and 6 with gonorrhœa. Amongst these there were only 4 affected with secondary symptoms.

1. The woman mentioned under head *f*, with ulcers of the throat, and condylomata, was thirty-five years of age, and previous to this attack, had been affected by condylomata, and ulcers on the genitals, which had been cured by a favourite popular remedy, sulphate of copper. Half a year after, the condylomata on the genitals returned, and shortly after, the ulcers in the mouth and jaws. In this state she entered the

hospital, having been deserted by her husband, and having suffered the most extreme privation for some months. Although six months had now passed since the first appearance of the disease, which had been totally neglected on account of the excessive poverty of this patient, as appeared from the cockscomb shaped broad condylomata on the labia, the distorted uvula, and caries of the bones of the palate, yet she had very little fever, and only in the evening, a good appetite, and, considering her state, was in a very tolerable condition, after having been a few days in hospital.

2. The woman (under head *h*.) with pustular eruption, æt. 41. These pustules commenced by little knots, which soon assumed the appearance of a pock, broke at the apex, and passed into a state of ulceration, forming pustules with a copper-coloured areola. These little knots, pustules and ulcerations, were grouped together on the face, became confluent on the breast, fore-arm, and legs. The cicatrices left after these ulcers were excavated, and of a copper colour. This eruption had exactly the appearance of that form of syphilis described by the old writers in France, and denominated by them "*grosse verole*." According to this woman's account, the only symptom which she had previous to this eruption was a whitish discharge, which had been neglected. The eruption appeared as soon as the discharge had ceased, commencing on the shins, then appearing on the arms and in the neighbourhood of the clavicles; and lastly, upon the face, where it was most extensive. A son of this woman, three years of age, who had shared her bed, became affected with rhagades of the anus and angles of the mouth.

3. The woman æt. 41 (cap. *i*.) with ulcers on upper and lower extremities, breast, neck, and face—a complication of syphilis with scrofula. From childhood she had suffered from these tumours, which never healed entirely, two or three such ulcers always remaining on the arms or legs when the rest had cicatrised.

4. The woman with general syphilis (cap. *k*.) and hectic fever, died a few weeks after admission into hospital.

To only two of those patients admitted with secondary symptoms was mercury administered, viz., the sublimate was given to the woman with secondary ulcers in the throat, and broad condylomata. The red precipitate, after Berg's method, in conjunction with warm baths, to the woman with syphilitic pustules. These two patients had not previously received any treatment. I gave hydriod. potassæ to the woman affected with inveterate ulcers, the most of which were healed when she was sent to the convalescent hospital. No treatment directed against

the syphilitic symptoms was administered to the woman who died.

A strong man, æt. 38, admitted with primary syphilitic ulcers on the glans and prepuce, and paraphymosis, was bled and treated for three weeks with sulphate of magnesia, when the ulcer healed. Fourteen days afterwards, an eruption extended over the whole body, consisting of spots of brown red colour, covered with shining scales of irregular form, and varying in size from that of a pea to a sixpence. (*Psoriasis syphilitica*.) Before admission, this patient had received no treatment. Red precipitate, after Berg's method, with warm baths, were ordered; the patient was getting rapidly well, although still under treatment on the 31st October, 1838.

Two girls of sanguine temperament, but scrofulous habit, with primary ulcers in the mouth and throat, were treated for fourteen days with sulphate of magnesia and hydriod. of potass, and discharged cured. The same means were used with another girl, who had also ulcers of the mouth and throat, who having apparently got well and been discharged, were obliged to return to the hospital on account of recurrence of ulceration in the soft palate.

Out of the 34 patients, therefore, received into hospital, only 3 were treated with mercury, and 4 with iodine, 4 out of these 7 were discharged cured, 1 handed over to the incurable hospital, and 2, the man with *psoriasis syphilitica*, and the woman with pustular eruption, still remained under treatment in the convalescent wards.

The remaining 31 of the hospital patients mentioned above, as well as 17 private patients, were treated simply with sulphate of magnesia, bleeding, warm baths, &c., but without mercury. Of these, all the private patients recovered, and 21 of those in hospital, 10 still remaining under treatment, viz., 2 men, 6 women, and 2 children.

Not one of those patients who were treated in the years 1836-7 returned to the hospital, a circumstance which would infallibly have happened, had the disease reappeared amongst them. On the contrary, in the years 1837-8, three cases of relapse occurred; first, the man mentioned above with *psoriasis syphilitica*; second, the girl ætat. 18, who was discharged on the 27th of January cured, apparently, but returned on the 4th of June, 1838. When first she entered the hospital there were primary sores on the soft palate, her genital organs exhibited no trace of syphilitic affection, and were in a state of virginity. On her second admission, the cicatrix which had formed on the palate had become inflamed and ulcerated; inflammation was

present on the posterior wall of the pharynx and on the amygdalæ, and the mucous membrane of the nose was also reddened. She was treated with hydriod. potassæ, and discharged with a sound cicatrix.

3. One of the private patients who had a primary syphilitic ulcer on the glans penis, was affected, three weeks after it was healed, with a pustular eruption on the scrotum and on the part of the penis which touches it; this was cured by washing the parts frequently with a solution of chloride of lime, the use of warm baths, and the internal use of the sulphate of magnesia.

These cases sufficiently prove, that in the treatment of syphilis without mercury, relapses more rarely occur than when it has been used, and when they do, they happen sooner, and are more tractable than in cases where it has been employed.

Dr. Schnur mentions, that the great severity of the preceding year did not appear to exercise any remarkable influence on those cases treated without mercury, recovery not being delayed on that account, nor the cases rendered worse. The same remark holds good during the year before, under the treatment with neutral salts. When the practice was adopted of administering sulphate of magnesia in combination with sarsaparilla and senna, three persons, in private practice, became affected with hæmorrhoids, which soon got well, and these persons had to thank the means employed for curing syphilis for relieving them of a painful state of constipation under which they had laboured. This means of treatment did not appear to produce any effect on the uterine vessels, menstruation not being either promoted or retarded thereby.

Fifteen cases are also mentioned by Dr. Schnur, treated by other surgeons in his neighbourhood without mercury; three are particularly referred to, which were under the care of Surgeon Benecke, in Stalupönen.

1. A weakly man, ætat. 34, many months infected, having broad condylomata around the anus. He was given hydriod. potassæ from the 10th of November to the 29th September, 1837. Eight drachms, given according to Eberc's plan, were sufficient to cure the disease perfectly. A solution of sulphate of copper with tinct. opii was employed as an external application.

2. L. F., ætat. 14, little, weakly, of slender make, affected with broad condylomata of the anus, and ulcers on the soft palate. Her genital organs were in a state of virginity. This disease had been contracted from lying and living with persons affected with syphilis. She was treated with hydriod. potassæ

from the 3rd to the 17th of January, and cured with two drachms.

3. H. F., sister to the foregoing, a child of 9 years of age, who shared her sister's bed, became affected with broad condylomata of the anus, and ulcers of the uvula. Cured with two drachms of hydriod. potassæ.

Ricord, the best French authority in the present day, has very accurately described these condylomata (flat) above mentioned, under the name of flat or mucous pustules. He considers them always to be secondary, and has sketched several interesting points in their history, well deserving of notice. His conclusion from a very extensive series of experiments, is, that they cannot be communicated by inoculation, and that they are a proof of constitutional contamination; that when syphilis has been communicated by a person having this affection, it is because there was at the same time some other affection specifically contagious.

In an admirable publication which has lately appeared, *The New York Journal of Medicine and Surgery*, is to be found a concise but excellent review of Ricord's work. From it we deduce the fact, that a great diversity of opinion exists as to the mucous tubercle, some considering it, with Dr. Schnur, as a primary symptom, others as a secondary, and others as a transition state or connecting link between both. We do not wish rashly to determine on which side the balance is likely to incline, for we must allow the constancy of the reproduction of mucous tubercles in the same individual, where contact has been permitted, having the evidence of our own eyes in proof; and yet we cannot deny the accuracy of the experiments by inoculation of M. Ricord, which go a great way to prove the secondary nature of the affection.* The experiments of Ricord fully establish the results of Hunter, that secondary symptoms cannot be communicated by inoculation. Many good observers, who have agreed on this point, have still been deceived by symptoms, which from their seat or time of appearance, seem at first sight to depend on a general infection, as primary ulcers of the lips, tongue, and even of the pharynx, which have been communicated by direct contact, and are inoculable; this is especially the case with primary affections of the anus, the true origin of which patients are very apt to conceal.

From M. Ricord's experiments on this point, two conclusions of some practical value are to be drawn.

* *New York Journal of Medicine and Surgery*, No. 1, July, 1839.

1st. A symptom does not cease to be syphilitic because it is incapable of being inoculated ; for though it has lost this property, it may still be hereditarily transmitted.

2nd. Every symptom capable of being inoculated is the result of *direct contagion*, and not of *general infection* from absorption of virus; and hence affords no proof of constitutional infection.

Hunter remarked, and the observation is verified by Ricord, that a first infection does not prevent the access of a second, and it is upon this result of repeated observations, that M. Ricord has founded his theory of disease, and by which he has been led to his valuable investigations by means of inoculation, for which we are delighted to perceive, that the Institute of France has rewarded M. Ricord with the gold medal.

Already have these experiments been confirmed by Mr. Mayo and Mr. Acton, the latter of which gentlemen, as well as ourselves, has closely watched the progress of M. Ricord's inoculatory experiments, and has drawn the following conclusions from them :—

*1st. The secretion of chancre, or of a primary syphilitic sore during its ulcerating period, produces, when inoculated, a series of characteristic phenomena, as constant as they are regular.

2nd. No other secretion will produce similar effects.

3rd. Inoculation then distinguishes chancres from all other sores.

4th. When the secretion of a sore (be its physical characters those of simple chancre, benign or malignant phagedena, &c.) produces a pustule, and subsequently a chancre, the surgeon may be convinced that it was itself produced by the contact of syphilitic virus, notwithstanding any other evidence to the contrary.

5th. The surgeon may satisfy himself usually as to the nature of the pustule previous to the third day ; if then cauterized, there is no fear of its becoming an intractable sore.

We will conclude this article by a reference to the opinion of Mr. Mayo, as lately published in the London Medical Gazette.†

“ I have stated that the matter of the sores in secondary syphilis will not convey syphilitic affection ; this assertion requires to be restricted. It is so far true, that inoculation with this matter, as the

* Lancet, January 4, 1840.

† London Medical Gazette, December 27, 1832, No. 630, p. 310.

experiments of Hunter and Ricord have proved, never produces chancre. But it is not less certain that there are other circumstances through which the secretions of secondary sores may become the means of conveying syphilis. An infant that has the disease constitutionally from its mother, if it have sores in the mouth, may infect its nurse's breast, and the nurse will herself have constitutional lues; and the local soreness in the nipple will be capable of infecting another infant that she may nurse. Mr. Babington observes:—'If such a child has sores in the interior of the mouth, and in this state suck the breast of a healthy woman, it is very common that the nipple should become ulcerated; and the ulcer will not resemble the fissures which are so common on the nipples of women who give suck, and which usually occasion no loss of substance, but will be a corroding ulcer, and will destroy the whole, or the greater part of the nipple before it is healed. It also produces in general an enlarged gland in the axilla, which, however, rarely passes into suppuration. At an interval of some weeks, sore throat eruptions, or nodes arise, which are in no respect distinguishable from the common forms of lues venerea. If a woman who has been thus infected by a child which she has suckled, suckles also another child, which is healthy, no infection will be communicated, provided the sound child is kept carefully to the opposite breast, and is never allowed to take into its mouth the nipple to which the diseased child is applied. But if this precaution is not taken, and the children are applied indiscriminately to either breast, the sound child will contract sores in the interior of its lips, and these will be followed by scaly eruptions on the skin, exactly resembling those which are seen in an infant which has received the infection from its mother.' "

Mr. Mayo has hit upon a subject which we think well worthy of the most minute attention and accurate observation, and one likely to give rise to considerable discussion, as throwing some doubt on the value of the inoculatory experiments which have been performed. It is this, that although the matter of secondary syphilis be incapable of communication by inoculation with the lancet, still that a more constant application of a sound part to the unsound secondary appearance may produce a similar secondary disease. It is principally to introduce this theory to our readers that we have adduced the instances recorded above in this article. Cancer may be taken as a familiar instance in exemplification of this theory. We again quote from Mr. Mayo:

"No one believes cancer, or medullary sarcoma, to be contagious. I am fully persuaded that the matter of cancer introduced into the skin upon a lancet, would not communicate cancer; as I know from my own observations, as well as from the authority of Hunter and Ricord, that the matter of secondary syphilitic sores, so introduced,

will not communicate syphilis. But I have recently witnessed the following remarkable cases :—A person, not passed the middle of life, three years ago observed swelling and soreness on one side of the glans and prepuce, an extensive, soft, irregular-shaped ulcer gradually established itself there ; it slowly spread, and gradually swellings formed in each groin, which attained a great size, and ulcerated half a year ago. There are now two enormous wounds, deep and sloughing, with raised, thick, soft, everted edges, and having the peculiar fetor of cancer. Together with the penis they are the seat of a form of the disease, in describing which as it occurs in the female breast, I have used the terms soft or fungoid cancer. These great sores are free from pain. Two years ago, the wife became aware of the existence of a sore and discharge of the vagina : a year and a half ago she miscarried. The sore in the vagina has since progressively enlarged without pain. It is now a very large ulcer, occupying three-fifths of the circumference of the anterior part of the vagina, the edges irregularly eaten away, the surrounding texture tumid, soft, and vascular ; it has exactly the same character with the ulcer on the genitals of the husband. The disease is unquestionably cancer, and the same form of cancer in both ; and it is difficult to refrain from conjecturing that it has been communicated by the party first attacked to the other, as it has been shown that secondary syphilis may be, though not communicable by inoculation."

Similar cases are mentioned by Dr. Merriman.

The allusion in the above paragraph of Mr. Mayo's to the primary communicability of secondary symptoms, refer to a passage in the former part of the same paper, which states as follows :—

"It has happened that men who have had syphilis, and appear to have been cured, shortly after marriage have infected their wives, or local disease and secondary symptoms have made their appearance in the wife, when her character rendered it impossible that she could have been otherwise infected, and when on the other hand the assertion of the husband and all probability have made it unlikely that he had contracted fresh disease. Now, as I have mentioned, psoriasis occasionally breaks out on the penis, as an isolated secondary symptom, and the spot has then a moist surface, if on the glans or reflected prepuce. It appears to me not impossible, that from this source may have been derived the material of infection in these puzzling instances."

The very doubts which are entertained on the subject of secondary contamination by distinguished surgeons, proves it to be worthy of close examination by those who are possessed of good hospital opportunities ; and were the numerical method adopted in classifying the plans of treatment, we have little doubt that the non-mercurial, or the moderately mercurial, would very

soon take the place, particularly in secondary cases, of the decidedly mercurial ; and those frightful cases of combined mercurial and syphilitic disease, which formerly used to horrify all beholders, but which latterly have become very rare, would disappear altogether, and unless when they might happen to be the production of the quack, entirely cease to cast discredit on the science of medicine. S. L. L. BIGGER.

Narrative of a Voyage to Madeira, Teneriffe, &c. By W. R. WILDE, M.R.I.A., Licentiate of the Royal College of Surgeons in Ireland. Two Vols. 8vo.

A MEDICAL JOURNAL is, of course, no place for noticing books of travels in general, but our fellow-countryman, Mr. Wilde, besides giving a faithful account of the

Antrea vast, and deserts wild,
Rough quarries, rocks, and hills whose heads touch heaven !

which he saw in his travels, also furnishes much valuable medical information on topics which cannot fail to be interesting to the Profession. He tells us in the preface, that he undertook, at the suggestion of Sir H. Marsh and Professor Graves, to collect information relative to the climate of the places he was about to visit. One of these was the island of Madeira, and we shall give his observations on it fully, as we think them well worth attention :—

“ The value of Madeira as a climate suitable to invalids, is daily more appreciated, because becoming better known ; and the numbers this year can hardly find accommodation. Besides hotels and boarding houses, families (many of whom are now resident here) can purchase houses for the winter season, although at rather a dear rate. These can be had either in the town itself, or in some of the beautiful suburban retreats, which, if not situated at too great an elevation, will be found very advantageous. Unless for those who go early in the season, it will be necessary to write beforehand, in order to procure good accommodation. So great was the demand last year, that the Portuguese, as might be expected, took advantage of it to raise the prices of their houses. It is much to be regretted that some enterprising merchant has not erected a number of small comfortable dwellings in the different sheltered spots near the town, or in the valley of the Cama de Lobos, for the reception of invalids, who amounted, with their friends, last year, to upwards of two hundred ; and they, with very few exceptions, were all English. Various opinions have been expressed regarding the comparative merits of this island ; but I think both medical men and those who have tried it themselves must now acknowledge that we have no European climate that can in any way be compared with it, or that affords the same

advantages that it does as a winter residence for invalids, more especially since steam has brought it within a few days' voyage of England. Even for those who can well afford the expense, it is a serious thing for invalids, especially for females, to resign their home and friends in search of a milder atmosphere, and few places that we are acquainted with will compensate, by the benefits they afford, for the comforts of the one, or the endearments of the other. But if such there be, I am constrained to say that place is Madeira.

"It may be well to mention, that a steamer goes out from Falmouth in September, solely for the use of invalids, and returns for them in May. The sea voyage itself, which is so generally found beneficial, is not prolonged to the extent it was in sailing vessels, and the accommodation is said to be much superior.

"Far be it from me to say that the climate of Madeira *can cure consumption*; but this I will say, that, independent of its acknowledged efficacy in chronic affections, it is one that will do more to ward off threatened diseases of the chest, or even to arrest them in their incipient stages, than any I am acquainted with. A dry, warm climate, with a healthy and equable state of the atmosphere, are, no doubt, the most powerful remedial agents we are acquainted with, more especially for parts where only such agents can be brought in contact. It is a remedy for which, in many cases, we have no adequate substitute, and the discredit into which its sanative efficacy has been brought, 'is to be sought for, not in the remedy, but in the manner in which it has been prescribed.'* And the hearsay evidence, often received from doubtful authority, on which professional men recommend particular localities as applicable to certain diseases and peculiarities of constitution, is highly reprehensible. To some, however, the heat of a Madeira summer will be too relaxing, and they will be improved not only by removal to a lower temperature, but materially benefited by the voyage—always remembering, that from the middle to the end of *June* will be the *earliest* period that an invalid, who has spent the winter at Funchal, can arrive with safety in this country. The spring is the season of trial, and as Funchal and the south side of the island are much exposed, a circumstance which adds to the favourable state at the other seasons, I feel assured that then the sheltered vale of Oratava, in Teneriffe, would be found preferable in many respects, besides being five degrees warmer than Funchal at this time of the year.

"It is the great *equability* of temperature that makes Madeira so justly celebrated; an equability that continues, not only throughout the seasons, but also through the range of the diurnal revolution.

"After the most accurate investigation for several years, the annual mean temperature is found to be 65°, and the daily temperature is now (November) from 70° to 72°, and seldom falls more than 3° or 4° during the night; and so slight are the dews falling in the

* Clark.

town, that clothes are frequently hung out to dry during the night; the lowest degree to which the glass was ever known to fall, even just before sunrise, was to 50°. With so little rain and dew, it may naturally be asked how vegetation appears so luxuriant? Outside the town, and in other parts more elevated on the island, very heavy dews fall, and, in addition, vegetation is amply provided for by the quantity of water coming from the hills, which irrigate even the lowest parts of the island.* Its insular position possesses many advantages over that of a continent, and this is here increased by the height of the mountains that rise in the centre. As the equability and comparative mildness of temperature, experienced at sea, are greater than that on land, so is an island such as this, in these respects superior to a continent. I said before, that the temperature can be varied by ascending the hills, but this will seldom be required during the winter months, and few invalids remain in the summer, when the siroc prevails for a few days.

“It moreover holds out a hope, that no other country can fulfil to the same extent, of LIFE to those remaining members of families, many of whom have been carried off one after another by hereditary phthisis. Cases of severe and protracted rheumatism may find the West Indies a preferable climate; and speaking from personal experience, I should say that asthmatic sufferers will not be totally free from attacks; but I must at the same time state that mine were generally brought on by fatigues encountered among the hills, often at a very great elevation.

“It would be unnecessary in an unprofessional work of this kind to enumerate ALL the diseases for which a residence in this climate would be useful; but I may observe, that for general debility, affections of the chest, the throat, and the windpipe, and cases of loss of voice from public speaking, it will be found most desirable, though I must say, that for all complaints in which humidity is to be avoided, when relaxation and increased secretion are present, the Canaries, especially Teneriffe, are preferable, owing, I should think, to its highly volcanic soil, more scanty vegetation, and extreme dryness.

“Those cases of threatened consumption, either owing to hereditary predisposition, or the sequel of inflammatory attacks, which are sent here with the lung congested, or advanced to solid tubercle, will derive benefit, but not by the mere visit of a few months: in such cases I should say patients ought to continue their residence for a very much longer period, even for years; diversifying their stay with occasional visits to the Canaries, which will give them the stimulus, in all cases most useful, of amusement, change of climate, and of scene.

* The quantity of rain that falls at Madeira is, no doubt, as great as that in some parts of Europe—but it is not in the town of Funchal, the residence of the invalids, that it falls, but in the higher parts. In it a continued day's rain is so little known, that invalids are almost always able to take out-door exercise at some time of the day.

"That Madeira can *prolong life*, even under the most unfavourable circumstances, the case of the late lamented Dr. Heineken is a proof. This gentleman came to the island when his case was pronounced, by some of the most acute physicians in Britain, as rapidly approaching to a fatal termination—yet, under those circumstances, he lived *nine years* in Madeira, certainly with the greatest watchfulness, until going one day to collect some fossils on the neighbouring island of Porto Santo, a storm overtook him, and he suffered all its hardships in an open boat; he returned next day to Madeira, and died that night. He requested a professional friend to examine his lungs after death; and Dr. Renton, who performed the autopsy, informed me that his astonishment was, how he could have sustained life with so small a portion of respiratory apparatus; hardly a vestige of one of his lungs remaining, and the other in a condition such as could not exist in this climate."

When in Egypt Mr. Wilde visited the large hospital founded by Mohammed Ali at Grand Cairo. This hospital is on a magnificent scale, beautifully situated, and capable of containing 1200 patients. The medical attendants are all European, chiefly French, are six in number; the salary of each amounts to rather more than 200*l.* a year; they are obliged to wear the Egyptian uniform, and to shave the head, but no sacrifice of religion or principle is demanded of them. Besides their patients, they have under their charge as pupils 300 young men, who are fed, clothed, and paid by the Basha. These young men wear a uniform, are regularly drilled as soldiers, and rise in rank according to their proficiency; when the period of their studies, five years nominally, but in reality often not more than three, has expired, they are drafted off into the army and navy. Their education seems to be most judicious.

"The pharmaceutical department is under the care of the professor of pharmacy, and the students of the college assist in turn to compound medicine, and become acquainted with the practical details of that most necessary branch of medical education. The pharmacy was on a scale of great magnificence; beautifully clean, in comparison with such establishments in England, and had in it all the most valuable and approved medicines, many of which were prepared in the laboratory by native hands.

"I was next transferred to the care of Dr. Sicher, who conducted me through the college and school of medicine, which, as I before stated, forms a part of the building of the hospital, so that the student had but to cross the court from his dormitory to the ward, and can proceed from thence in a few minutes to the dissecting theatre, or lecture-room; become acquainted with *materia medica* under the same roof in which he sleeps, and enjoy his morning's walk in the botanic garden beneath his window. Besides this, they are all required to become acquainted with practical operative chemistry, and

for that purpose are sent for a certain time to work at the chloride of lime and saltpetre manufactories. This system, added to that of the general medical education here given, is one well worthy of imitation in Great Britain, and reflects no small credit on its founder, Clot Bey.

"The school of medicine consists of seven professorships, viz.—anatomy and physiology, surgery, pathology and internal clinique, pathology and external clinique, medicine and chemistry, botany and materia medica, and pharmacy. Instruction is given by means of an Arab interpreter, or dragoman; the professor writes his lecture, and it is translated to the class by the interpreter.

"The laboratory contained a good chemical apparatus, and the dissecting-room several subjects. This latter indispensable requisite to medical education, it would be scarcely worth mentioning, but that it occurred among a people whose strong religious prejudices prohibited even the touching of a dead body in some cases; and the introduction of this novel science, was one of the most difficult things Mohammad Alee had to enforce for a long time. He in the first place referred it to the priesthood, who obstinately set their faces against it, declaring it utterly incompatible with the religion of the Prophet of Mekka. The Basha's answer, that it was his royal wish and pleasure that they should legalize the act, and that, if they did not speedily do so, it was more than probable they themselves should form material for the first experiment in this branch of the practical sciences, soon brought them to reconcile their prejudices with his unbending will."

We think it our duty to say, that the short extracts our contracted space has alone enabled us to give, afford a very faint idea indeed, of the agreeable style of this very entertaining work.

Elements of Physiology. By J. MÜLLER, M. D., translated from the German, with Notes by WILLIAM BALY, M. D. Second Edition. Parts II. and III. containing, *Secretion, Digestion, Functions of the Glands without Efferent Ducts, Excretion, and the Nervous System.*

WE have not space to do more than announce the publication of this most valuable work; since the great Haller no physiologist has appeared who exhibits extensive erudition combined with the most brilliant genius for original observation and discovery, to the same degree as Müller; every page of the volume before us exhibits proofs of profound learning and deep research, and we most anxiously recommend it both to students and those who are engaged in practice. In truth, any one who has thoroughly mastered Müller's elements, may feel assured that he is acquainted with every thing worth knowing in physiology. To Dr. Baly the public is greatly indebted both for his excellent translation and the numerous additions and illustrations he has introduced.

SCIENTIFIC INTELLIGENCE.

PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF DUBLIN.

SESSION 1839—1840.

Sixth Meeting, January 11, 1840.

MR. ADAMS in the Chair.

1. *Morbus Coxæ*.—Mr. Ferrall presented a specimen of this disease; he observed that at the last meeting of the Society, he had exhibited a preparation illustrative of one form of shortening of the lower extremity, in cases of morbus coxæ, and which shewed that considerable displacement of the head of the bone upwards might take place, without destruction of the capsular ligament. The specimen which he now exhibited, was taken from the body of a female admitted into St. Vincent's Hospital with general anasarca and albuminous urine; shortly after her admission, it was discovered that she laboured under old disease of the hip joint, the limb was nearly two inches shorter than the sound one, it was fluxed, adducted, and rotated inwards; the trochanter appeared to form a projection on the dorsum ilii. The patient, having lingered for some time, ultimately sunk. Upon examination after death, the trochanter, which appeared to be placed so high upon the dorsum ilii, was found not to project beyond the brim of the acetabulum; the capsular ligament was deficient at the lower and inner part of the articulation, but in all others places perfect; the head of the bone and greater part of the cervix were destroyed by caries; what remained of the neck of the femur lay imbedded in a large perforation of the acetabulum, which communicated with the cavity of the pelvis, below the ileo-pectineal line; above this line a smaller perforation existed, in which lay a fragment of loose carious bone; the concavity of the ilium was bare, and here and there carious. There was, therefore, in this case, deepening of the acetabulum from caries, with destruction of the head and part of the neck of the bone, to account for the shortening of the limb: there was no luxation, nor

destruction of the capsular ligament, except the small fistulous opening at its lower part. The disease had existed for four years. (*Museum St. Vincent's Hospital.*)

2. *Pericarditis*.—Dr. Stokes exhibited a specimen of recent and singularly latent pericarditis, with the history of which he had been favoured by Dr. Grant. The subject of the case was a soldier, æt. 30, who, during a residence of eight or nine years in the West Indies, had suffered much from intermittent fever. Fourteen days before his death, he complained of cough, which was relieved by the use of tartar emetic solution: about a week previous to his decease, he was admitted into the military hospital, complaining much of pain in the right side and dyspnoea; he had great prostration of strength, and an almost imperceptible pulse, small, compressible, and beating 120 in the minute; he had tenderness on pressure over the right hypochondrium, to which situation alone he referred as the seat of his distress; upon the fourth day previous to his death, he for the first time complained of pain in the left side, he had constant cough and urgent dyspnoea, he died a week after his admission into the hospital. The preparation afforded a most extraordinary example of pericarditis, the lymph which covered the membrane being in some places an inch in thickness; there was no purulent effusion; the left ventricle was firm and contracted, and the heart increased in size. Dr. Stokes remarked, that the great interest of the case was the singular latency of the disease; the patient having all through referred his distress to the right side. The anatomical characters of bronchitis and of pleuritis, (particularly upon the left side,) were present. (*Museum, Richmond Hospital.*)

3. *Pulmonary Apoplexy*.—Dr. Greene presented a specimen of this disease. The history of the case was imperfect, but as far as he could collect, the patient appeared to have been subject to palpitations for twelve or fourteen years; this, however, had not prevented him from following his occupation as a sailor. He was a man of very robust frame, and had a remarkably large chest. About five months ago he was admitted into one of the hospitals at Quebec, complaining of distress in the præcordial region, and violent palpitations. After some time he got better, and resumed his usual occupation; but during his voyage home, became considerably worse, and on arriving in Dublin, was admitted into the Hardwicke Hospital. His symptoms were constant dyspnoea, harassing and incessant cough, hurried and wheezing respiration. His complexion was leaden-coloured, and he had dulness over the region of the heart, to the extent of about six square inches; the dulness also extended over the sternal region. The action of the heart was tumultuous and irregular; there was at first a very distinct impulse, and this was succeeded by five or six imperfect ones. Still the first and second sounds of the heart were not abnormal, and there was no fremitus. From the great extent of space over which the heart could be heard, Dr. Greene inferred that there was hypertrophy with dilatation, and from the circumstance of the pulse at the wrist participating in the irregularity of the heart's action, he thought at first

that there might be valvular disease. About ten days after admission he had hæmoptysis, to the amount of about eight ounces. The discharge of blood continued in a greater or less degree for six days: on the fourth day after it commenced, the rhythm of the heart was restored, both sounds resumed their natural character, and there was neither bruit de soufflèt nor bruit de râpe. The same remark was applicable to the pulse, which became completely developed in the right arm, (in the left it could not be felt, owing to a high division of the brachial artery,) and quite in proportion to the ventricular contraction. From these circumstances Dr. Greene inferred, that there might be hæmorrhage into the substance of the lung, and that by the occurrence of this, and the hæmoptysis, the pressure on the heart being removed, and the weight of the column of blood being taken away, the heart had come back to its original rhythm. He examined the chest with care, and found that anteriorly and posteriorly on the right side there was dulness, at first modified, and afterwards complete. In addition to this, there was a large rale over the mammary region; at one spot the voice was resonant, and a fine crepitus was audible. Dr. Greene inferred, that there was pulmonary apoplexy, and that it was over distention of the heart; from the pressure of a large column of blood which produced the tumultuous action of the organ, as well as the absence of the normal sounds. At the approach of death the heart became again tumultuous in its action. On examination the heart was found to be more than one-third larger than the natural size; the right side appeared very much enlarged, and this would account for the dulness heard over the right side of the sternum. The right ventricle was greatly dilated, but was not hypertrophied like the left ventricle, the walls of which were of considerable thickness; there was no valvular disease of any kind. In this point of view Dr. Greene thought the case of great importance, for although the rhythm of the heart was disturbed and its action irregular, there was no bruit de soufflèt or bruit de râpe. The state of the lung was that which is generally described as apoplectic engorgement. In the situation where the gargouillement was heard, the substance of the lung was broken up, and various parts of it were dotted with small round masses of coagulum, which, when turned out, left behind them a corresponding number of well defined cavities. Spots of engorgement were also discovered in the left lung, but there were no cavities. When the right lung was compressed between the fingers it had the feel of a lung in the second stage of pneumonia, but the fluid which exuded from it was pure blood. The mucous membrane of the bronchial tubes was of a vermillion colour, and deeply tinged with blood. Dr. Greene said in conclusion, that he had brought forward the preparation as the first example he had witnessed of that peculiar form of pulmonary apoplexy which depends on hypertrophy of the heart, unaccompanied by disease of the valves.

5. *Tubercular Phthisis*.—Dr. Graves exhibited the lungs of a woman who had died a few days previously at Sir Patrick Dun's

Hospital. She was admitted with symptoms of phthisis, accompanied by chronic laryngitis. Dr. Graves remarked, that it was well known, that where laryngeal disease with stridulous breathing exists, many of the phenomena of phthisis are recognized with difficulty. The character of the inspiration, of the voice, and of the cough, are not the same as when laryngitis is absent, and the sounds of the larynx mask those of the lung. The chief point to which he wished to refer in the case alluded to was this: both lungs were filled with tubercles, and in both there were tubercular cavities, a large one in the left, a much smaller one in the right lung. The right lung was every where closely adherent, in the left lung there were no adhesions; any one who examined the lungs would have expected, that during life they would have given evident indications of the nature of the disease, and that there would have been distinct dulness on percussion. Dr. Graves had percussed the chest, and it every where returned a clear sound, no dulness could be discovered in any part. He remarked, that in the investigation of diseases of the chest he had been frequently struck with the fact, that although percussion gives in some cases signs of great value, and which, when positive, appear to be infallible, in other cases the information derived from it is questionable. The truth of this he had frequently verified in cases of phthisis, in which tubercle might exist to a considerable amount, and without dulness.

5. Corroding Ulcer of the Uterus. Cancer of the Uterus.—Dr. Churchill exhibited two specimens of considerable interest, as tending to throw light on two affections of the uterus, differing in their nature, but very frequently confounded together. One of these was an example of corroding ulcer, the other of cancer, both of a malignant character, and attended with nearly the same fatal results, but differing very much in their pathological conditions. In corroding ulcer there is loss of substance without any new deposition or hypertrophy. In cancer there is also loss of substance, but the deposition of new matter is very considerable, and greatly exceeds the amount of loss, so that the uterus instead of being diminished in size is increased. This point Dr. Churchill considered interesting, as affording grounds for a correct diagnosis; the symptoms may be similar in both, both may be accompanied by severe lancinating pain, in both the discharge is acrid, and in both the patient may be run down by hectic; it is only in the pathological condition of the parts, that we have grounds for making a distinction between them. In corroding ulcer, where there is no deposition, when the finger is introduced, the pelvis is found to be less full than usual, the uterus is evidently diminished in size, and what remains of it is moveable. In cancer the finger cannot penetrate as usual, the bulk of the uterus fills up the cavity of the pelvis, and the parts are more or less fixed and immoveable. Dr. Churchill said he had never met an instance in which these diagnostic signs had failed.

6. Wound of the Thoracic Aorta.—Mr. Smith exhibited a recent specimen of wound of the aorta, for which he was indebted to Mr. Swift

of Kingstown. The preparation was taken from the body of a youth aged 16, who had been stabbed with an iron nail rod in a scuffle with a smith, who worked in the same forge with him; the instrument had entered the left side, between the sixth and seventh ribs, passing through the lung close to its root, and entered the aorta about an inch above the opening in the diaphragm for the transmission of that vessel; about a pint and a half of coagulated blood was found in the cavity of the pleura. The boy died in three minutes and a half after the receipt of the injury. Mr. Smith said he exhibited the preparation as an example of an accident of very rare occurrence, and also as tending to shew the great difference between the middle and external coats of arteries, for any one who inspected the preparation would perceive that the cellular coat was only partially divided, while the middle coat and lining membrane were ruptured throughout their entire circumference. (*Museum, Richmond Hospital.*)

7. *Cerebral Apoplexy.*—Mr. Adams said he had a case of some interest to lay before the meeting. During the course of the last week, a man, aged 63, for some years an inmate of the House of Industry, and in the enjoyment of good health, went out to walk on leave, and shortly after his return retired to bed; during the course of the night he was heard to make one or two stertorous inspirations, and nothing more was observed until morning, when he was found quite dead. On opening the cavity of the chest, the heart was found to be of inordinately large size, and had a rounded apex, but did not present any marks of valvular disease. Mr. Adams then proceeded to open the brain, and discovered some effusion under the arachnoid. The most remarkable feature of the case, however, was an effusion of bloody serum into the cavity of the ventricles, very like that which is seen in hæmorrhagic pleuritis; all the blood in the vessels was of a dark colour, in the arteries as well as in the veins. The case was interesting when placed in juxta position with that just detailed by Dr. Greene. In Dr. Greene's case the heart was enlarged but the mischief consequent on this enlargement fell on the lungs; in Mr. Adams's case also the heart was enlarged, but the weakest vessels appeared to be those of the brain. There was this difference, however, none of the vessels had given way, and the only morbid phenomenon was the effusion of bloody serum.

8. *Hypertrophy of the Carneæ Columnæ.*—Mr. Adams said he wished to exhibit a specimen of hypertrophy of the fleshy columns of the mitral valves; the patient was subject to violent paroxysms of dyspnoea and palpitation, in one of which he expired. On making an incision into the cavities of the heart, the left ventricle was found to be almost completely filled by the enlarged fleshy columns, among which two of these columns were particularly hypertrophied. This case shewed that there might be hypertrophy, not only of the substance of the ventricles, but also of the fleshy columns and chordæ tendinææ. (*Museum, Richmond Hospital.*)

Seventh Meeting, January 18.

Professor GRAVES in the Chair.

1. *Subclavian Aneurism; fusiform Dilatations of the Artery.*—Mr. Smyly exhibited the parts in this case, taken from the body of a man aged 41, who was admitted into the Meath Hospital under the care of Sir P. Crampton. The injury from which the disease occurred was a fall from horseback while hunting; at the time of the accident the patient experienced most severe pains in the shoulder, but as soon as he recovered from the shock, he remounted, and rode with the hounds for the rest of the day. During the following week also, though suffering from pains of the shoulder, he hunted three times. In a month a pulsating tumour appeared under the right clavicle, and the patient came to hospital, where he died suddenly on the day after admission.

Dissection did not reveal the cause of death. The heart was large, but its parietes not thickened; there was no valvular disease. The blood in all the vessels, arterial as well as venous, was fluid, dark-coloured, and of a tarry consistence: immediately external to the scalenus muscle, the aneurismal enlargement commenced. The artery presented two dilatations, with a small intervening portion, about half an inch of the artery, apparently natural. The inner dilatation was the smallest. They were situated anteriorly and inferiorly with respect to the aneurismal sac, with which they freely communicated; the sac was the size of an orange, and bulged in between the first and second ribs, into the right side of the chest, its pressure had bared the surface of the first rib. The walls were thick, irregular, and fibrous.

The patient had enjoyed the best health up to the time of the accident; from that time till the period of his death he suffered violent pain in the shoulder, which seemed to be caused by pressure on the axillary nerves.

2. *Purpura Hemorrhagica. Effusion of Blood into the arachnoid Sac, and under the Pericardium.*—Dr. Hutton laid the specimens in this case, together with a drawing of hæmorrhagic spots on the pericardium, on the table of the Society. The patient, a boy of eleven years of age, had frequently exhibited slight symptoms of the purpura simplex, without disturbance of his general health, until last June, when epistaxis, hæmorrhage from the gums, and from a sore on his foot, took place; the hæmorrhage was arrested in hospital, and he went out in apparently good health, but with the purple spots remaining. The hæmorrhages, however, returned in December, and in a few days, though the loss of blood was by no means considerable, he became pale, and his pulse was small and feeble; the epistaxis was very frequent, he became quite exhausted, and fell into a stupid, lethargic state; he rallied for a short time, but soon after sunk exhausted. The body presented an anemic appearance, with some traces of purple spots on the surface.

The substance of the brain was unusually free from red blood, but in the arachnoid sac, in the temporal regions, there existed some fluid blood. The heart was covered with purple spots, particularly over the right auricle, where the effusions below the serous membrane were more numerous, and of a darker colour than elsewhere. The blood was not unusually fluid. (*Museum, Richmond Hospital.*)

3. *Superficial Gangrene following the Eruption of Bullæ.*—Dr. Hutton brought forward a case of this description, which occurred in a child. The first appearance of bullæ was preceded by vomiting and purging. The bullæ, which came on consecutively, and were similar to pompholyx diutinus, were in each instance followed by a patch of superficial gangrene which formed beneath the vesicle, these sloughs exactly resembled those produced by boiling water. The child was not badly nourished, but had a pale unhealthy aspect; it died with convulsions in a few days after admission. The brain was healthy, somewhat firmer than usual; the lungs, heart, and digestive organs presented nothing remarkable. Two coagula existed in the digestive canal, one in the stomach, the other in the ileum.

4. *Pericarditis, with great liquid Effusion; pulmonary Apoplexy.*—Mr. Hamilton laid the specimens in this case on the table; they had been forwarded to him by Dr. Hudson of Navan. The patient, a lad aged 19, was admitted under Dr. Hudson's care on the fourth of December, and died on the sixth of January following; he had no symptoms of rheumatism, but for three weeks before admission, had suffered from weakness about the heart, and dyspnoea, not, however, sufficient to prevent his moving about. Four days before admission he was suddenly seized with pain in the cardiac region, so acute as to make him shriek out, to this succeeded fainting and extreme dyspnoea; at this time he was largely bled.

His symptoms on admission were as follows; great pallor of the whole surface, extreme dyspnoea, accompanied with attacks of spasmodic cough of the most distressing violence; his breathing and pulse very rapid, and the latter feeble and irregular, no two beats being alike in strength or frequency. The left side was evidently full, and presented dulness on percussion, extending from the lower margin of the ribs to the infra-clavicular region, and extending across the sternum to the upper part of the right side; the sounds of the heart were scarcely at all audible.

Repeated cupping, blistering, and the use of calomel, squill, and digitalis were employed; for the first few days, the attacks of syncope were most alarming, but on the gums becoming sore, a marked improvement took place: the face became less anxious; the convulsive cough and dyspnoea subsided, and he could lie in the horizontal position; the pulse became regular and fuller; and the sounds of the heart were accompanied by frottement. This improvement was but temporary. In three days the dulness increased over both sides, so that Dr. Hudson thought it unlikely that it solely depended on the pericardial effusion. Copious hæmoptysis took place. The orthopnoea returned, and he speedily sank.

On raising the sternum nothing was to be seen but an enormously distended pericardium compressing and displacing both lungs; the liquid was of a dark coffee colour, and on standing, threw down a sooty precipitate; its quantity exceeded three pints. The heart, particularly in its posterior and upper portions, was covered with lymph deeply imbedded. The valves were healthy, and the heart somewhat enlarged.

The right lung presented the appearances of circumscribed apoplectic effusions, particularly in its inferior portion.

5. *Polypus of the Uterus*.—Dr. Churchill exhibited the preparation and casts in this case. The woman was admitted into the Meath Hospital under the care of Mr. Smyly, she then presented great enlargement of the abdomen, with a tumour in the vagina; during her stay in hospital this tumour descended perpendicularly, till it projected beyond the external parts, to the extent of twelve inches; as it descended, the swelling of the abdomen diminished, and ultimately subsided. The tumour was removed by operation; but the patient sunk from inflammation of the pelvic organs. The tumour grew from the posterior wall of the uterus, and weighed between four and five pounds.

6. *Polypus of the Uterus, producing fatal Hæmorrhage after Delivery*.—Dr. Churchill exhibited the drawing of another case, in which a large polypus had existed during pregnancy. Natural labour took place, but the patient sank from flooding, which resisted all treatment; a polypus of the size of a large pear was found attached to the fundus of the uterus.

7. *Malignant Tumour in the anterior Mediastinum*.—Mr. Adams presented a series of preparations and drawings illustrative of encephaloid disease, a remarkable case of which had recently come under his observation: the particulars were as follows. On the 25th November, 1839, Mr. Cullen of Suffolk-street, was called to see a lady, æt. 40, of full habit, and two years married, but without children, she had œdema of the left hand, and of the face, and oppressed breathing, increased by any considerable exertion; she was, however, able to go out every day.

She complained chiefly of sudden and violent fits of coughing, of some minutes' duration, occurring occasionally in the day-time, but so frequently at night, as to prevent her from sleeping; in the intervals of these fits she had a short, dry cough; she sometimes expectorated a small quantity of frothy mucus, which on a few occasions was tinged with blood. These symptoms had existed for some time, but she could not accurately determine the date of their commencement. The veins of the neck and face, particularly on the left side, were greatly swollen, and her face was often livid from the violence of the cough. The chest was clear on percussion, and respiration audible and natural throughout both lungs. The sounds of the heart and large vessels were normal, but the pulse at the wrist was very small, and about 90. In the course of three or four weeks her symptoms became greatly aggravated. The left arm was enor-

mously distended with serum, the right considerably so; the mammae and the integuments of the thorax also became œdematous. The dyspnoea was excessive; she was constantly awake at night, and remained sitting up in bed, leaning forwards. Spots of ecchymosis now began to appear on the breast and arms, the left elbow and wrist on which she used to lean in bed were threatened with gangrene, and the buttocks commenced to slough. The neck immediately above the sternum was tense and swollen, with an oppressive sense of weight and fulness, and she complained of a continued feeling of suffocation. The lower limbs subsequently became œdematous, the left more so than the right. These distressing symptoms continued with little variation until the 15th, January, 1840, when she died. The stethoscopic evidences of a natural condition of the heart and lungs were unchanged throughout the entire progress of the case. On removing the sternum, an oval tumour, about three inches long and an inch and a half in breadth, was found in the anterior mediastinum, occupying pretty nearly the situation of the thymus gland. It lay somewhat obliquely, its larger end being above, and towards the left side; a portion of it was attached to the trachea, and to the arch of the aorta; when cut into, it was found to be of a carcinomatous structure, the great mass of it white, firm, and nearly cartilaginous, but near the circumference some portions were soft and brainlike, and there were scattered through it two or three melanotic spots. The trachea was red, the bronchi dry, the lungs emphysematous. The heart, aorta, and pulmonary artery were healthy. Mr. Adams said that the situation of the tumour inclining to the left side, and encroaching on the vessels of the shoulder and neck in that direction, accounted for the greater degree of œdema observed on the left side. The disease was a specimen of the encephaloid tumour, described by Bayle, and of which some cases have been described by Dr. Stokes in his work on Diseases of the Chest. Mr. Adams concluded by exhibiting several drawings of cases of this description which had come under his notice. (*Museum, Richmond Hospital.*)

8. *Softening of the Heart in Typhus.*—Dr. Stokes said he wished to exhibit two specimens, the hearts of two individuals, a father and son, who had both died of typhus. The fever was one of a peculiarly malignant character, and no less than four individuals of the family had died from it, two at home and two in Hospital. Dr. Stokes said, that with reference to his opinions on the state of the heart in typhus, some misconception had existed. It had been stated by some that he had asserted that there was always softening of the heart in cases of fatal typhus. This, however, was not his opinion; in some cases the heart was remarkably softened, in others not at all, and there was a great variety of shades between these states. The cases to which he alluded were admitted together, and presented nearly the same symptoms, at least both patients were alike covered with petechiæ, and the pulse was equally rapid in both. The son, however, had a peculiar train of nervous symptoms, he had subsultus of the face, eyes, and limbs, to a very remarkable degree,

sometimes resembling the effects of an electric shock, and producing momentary opisthotonos. The phenomena of the heart were the following: it appeared to act with great force, but when the cardiac region was examined, the impulse was found to proceed almost entirely from the contraction of the right ventricle; the left ventricle barely tilted against the ribs, and its sound and impulse were very feeble, while over the right cavity the sound was proportionably loud and the impulse strong. Wine was administered, but instead of bringing down the pulse, seemed to quicken it, for it rose from 100 to 130, and continued so until death. The same difference also in the state of the ventricles lasted throughout. The patient died on the eleventh day. On dissection the left ventricle was found to be of a dark red colour, and presented on its surface two large livid patches; the muscular substance was soft and friable, and broke down easily under the finger. The right ventricle was of the natural colour, firm and resisting. There were no symptoms of inflammation or putrescence. Dr. Stokes observed, that this went to confirm an opinion long entertained by him, namely, that the softening of the heart was neither the result of inflammation nor of putrescence, but one of those alterations which occur in fever, the nature of which at present is undetermined.

The second specimen was the heart of the father; he died on the thirteenth day, his death being caused by asphyxia produced by enormous secretion into the bronchial tubes. About twenty-four hours before death he improved greatly, and seemed as if about to recover; his countenance assumed a more favourable expression, his tongue became cleaner, and his pulse began to fall. But a fresh attack of effusion into the air tubes took place, and he sank from asphyxia. From the time of his admission, the impulse of the heart could scarcely be felt, and the only sound audible was that which accompanied the contraction of the right ventricle. It should be stated, however, that there were large bronchial rales present, and that these must have more or less obscured the sounds of the heart. On the day before his death, the impulse of the heart could be felt, and the sounds of both cavities were equally audible. On dissection both sides of the heart were found to be equally softened, and there was effusion of bloody serum into the cavity of the pericardium. This liability to effusion into the pericardium, in cases of typhus, Dr. Stokes considered to be a point worthy of attention. His opinion with respect to the specimen under consideration was, that it was softened, but not to the same extent as that of the son; and that at the time of the man's death, it was returning to a state of health. The chief pathological interest attached to the cases was, that in one instance the affection of the heart seemed to be more or less general, whereas in the other it was limited to one side. Dr. Stokes, in conclusion, stated his intention to lay before the Society every new fact connected with the history of the state of the heart in typhus.

Eighth Meeting, January 25.

Mr. CARMICHAEL in the Chair.

1. *Encephaloid Disease of the Bones, Liver, Lungs, and Lymphatic Glands of the Chest and Abdomen. Pneumonia.*—Mr. Smith said that on the 19th of January, 1838, he had an opportunity of shewing a series of preparations illustrative of scirrhus tubercles in the bones, amounting to twenty-four in number, and taken from the body of the same individual; all of these were illustrative of that form of degeneration which has been termed scirrhus by Dr. Carswell. He would now beg leave to lay before the Society a number of specimens of cephaloma, occurring in several of the bones of the body, and coexisting with tumours of the same kind in the liver, lungs, and glandular apparatus. The preparations were taken from the body of a man, aged 77, remarkably large and muscular, and having all the appearance of general good health, with the exception of some symptoms which were supposed to arise from chronic disease of the heart. He was admitted into hospital on the 17th of January, with the ordinary symptoms of chronic bronchitis attended with emphysema. He remained without any peculiar alteration until a few days before death, when he was attacked with pneumonia of the lower lobe of the right lung, which terminated fatally on the 23rd. On dissection, the usual phenomena of bronchitis with emphysema were discovered, and in addition to these, the right cavity of the pleura contained a large quantity of a sero-sanguineous fluid. The lower lobe of the right lung presented an example of pneumonia in its third stage; the rest of the lung was free from inflammation. When an incision was made into the diseased portion, a large quantity of purulent matter escaped, and the surface of the lung was of a bright fawn colour; produced by a stratum of purulent matter lying immediately under the pleura. Throughout the remainder of the lungs, on the surface as well as in the substance, there was a number of small encephaloid tubercles of various sizes. The glands of the posterior mediastinum exhibited evidences of an analogous degeneration. They formed a considerable tumour in the posterior mediastinum, and had elevated the pleura from the right side of the spine and the aorta from the left. The aorta adhered so firmly to these glands, that it could not be separated without some difficulty, but it did not appear to have suffered any compression, nor did there seem to be any impediment to the flow of blood. On opening the abdomen, the liver displayed a fine specimen of the tubera diffusa of Farre; the tubercles existed both deep in the substance and on the surface of the liver, and in the latter situation presented the usual cup-shaped indentations. The gall bladder and the biliary ducts were healthy. Mr. Smith observed, that the process of softening generally commenced in the interior of these tubercles, so that when one of them in this state was examined, a cavity was found in the centre resembling the cavity of an abscess. The abdominal glands along the course of the aorta and vena cava were similarly diseased, and adhered to the neighbouring vessels.

The remaining organs of the abdomen were healthy, with the exception of the spleen, which presented the cartilaginous condition of its capsule, so commonly observed. During the dissection the body slipped off the table, and one of the vertebræ was fractured. This led Mr. Smith to suspect that the bones were diseased. He removed a portion of the spine corresponding to the diseased thoracic glands, and found in the centre of one of the bodies of the vertebræ a distinct, circumscribed tubercle, of a pale rose colour. He found similar depositions in the ribs, clavicle, and sternum. In some of the bones the matter was deposited in the form of tubercle, in others in the state of infiltration. The aorta, from its commencement to its bifurcation, was covered in various parts with atheromatous and earthy deposits, and in many situations the internal coat of the artery was destroyed. The patient had no symptoms except those of chronic bronchitis, and there was nothing in his aspect calculated to excite suspicion of the existence of extensive organic disease. (*Museum, Richmond Hospital.*)

2. *Encephaloid Disease of the lower End of the Femur.*—Mr. Adams exhibited a preparation of this disease occupying the lower extremity of the femur. The tumour had grown rapidly, and was attended with a remarkable pulsation, which seemed to be diastolic, and induced some to consider the case as one of popliteal aneurism.

During the performance of amputation, which was deemed unavoidable, the hæmorrhage was most copious, and restrained with great difficulty; the man bled profusely, and died soon afterwards. On dissection the disease proved to be cephaloma of the end of the femur, without any affection of the cartilages of the joint. The tumour was attached to the popliteal artery, which it had pushed out of its situation; the impulse of the artery was communicated to the tumour, and this accounted for the pulsation felt during life. (*Museum, Richmond School.*)

3. *Encephaloid Disease of the Wrist.*—Mr. Adams also exhibited another specimen of the same disease, situated in front of the wrist joint, and extending a short distance up the forearm; the tumour was as large as a small orange, and had the deceptive sense of fluctuation, so generally noticed on cephaloma. The patient was a young lad, a lunatic: amputation was performed, and the case terminated favourably, there having been no recurrence of the disease, though eight years have elapsed since the performance of operation. Mr. Adams remarked, that there was another interesting feature in this case, namely, that the boy recovered his reason perfectly after the operation. (*Museum, Richmond Hospital.*)

4. *Acephalous Fœtus.*—Dr. Churchill exhibited two specimens of acephalous fœtus; in both of which the quantity of brain was extremely small; in one the placenta had become adherent to the head and back of the neck at an early period of development: they were both born alone, and one of them which had a hair lip and cleft palate, lived eight or ten hours. (*Museum, Richmond School.*)

5. *Fibrous Tumours of the Uterus.*—Dr. Churchill also exhibited

several specimens of this disease; they presented the usual white fibrous appearance: Dr. Churchill remarked, that in the incipient stage, and when left to themselves, they scarcely give rise to any symptoms. Perhaps the only one is occasional variation and sometimes suppression of the catamenia. If let alone they are disposed to remain quiet, but if irritated they may take on inflammatory action, which may extend to the coverings of the uterus, and in this way the patient may be carried off by peritonitis.

Another specimen of the same disease was exhibited, which was attached to the appendages of the uterus: a point of interest connected with the history of fibrous tumours of the uterus, Dr. Churchill remarked, was the influence they might have on the function of generation. In some instances they did not interfere with the generative process at all, in others they gave rise to symptoms of an embarrassing and even of a formidable nature. A case is given by Dr. Montgomery, in which the impediment to delivery produced by one of these tumours was so serious, as to require the Cæsarean section. The operation was performed with care and rapidity, but on dividing the uterus, the fibrous development was found not only on the external surface, but also in the interior of the uterus, preventing the closure of the wound after the operation.

6. *Fibrinous Deposit in the Testicle; Hydrocele.*—Mr. Smith said he was about to submit a series of preparations confirmatory of some points mentioned by Mr. Cusack at a meeting of the Society, held on the 25th of May, 1839, illustrative of that species of chronic enlargement to which some had applied the name tuberculated testicle. In speaking of the disease, Mr. Cusack had expressed his opinion that it was not connected either with scrofula or venereal, but was the result of some inflammatory condition through which the organ had passed. The disease presented characters differing from those of the true scrofulous or tuberculated testicle, and generally commenced in the body of the organ in the form of a yellow, solid, firm mass. This Mr. Smith looked upon as nothing more than a deposition of fibrine in the structure of the testicle. He exhibited a series of drawings shewing the disease in different stages, and stated that in most of the cases it had been accompanied by hydrocele. Whether there was any thing venereal in it or not, he could not decide, but he was convinced it was not scrofulous. He had taken the trouble of examining with great care the body of the person from whom the specimen before him was taken, and could say that there was no trace of tubercular development in any of the viscera. The disease appeared to be the product of chronic inflammation, and was generally accompanied by obliteration of the tunica vaginalis, except at the upper part, where a cavity still remained, in which hydrocele was apt to form. Sir Astley Cooper has described the disease, and states that in the early stage of it a yellow, firm, adhesive substance is deposited in the tissue of the organ. This deposition may remain through life, without undergoing any further change, or it may run on to suppuration. When suppuration commences in the centre of

the organ, it comes very slowly to the surface, and a tumour is formed which he calls granular swelling of the testicle. Mr. Smith shewed several drawings illustrative of this condition of the organ, and observed that it was a disease, the nature of which had been frequently mistaken. It has been looked upon by some as malignant and incurable, and in treating it recourse was frequently had to extirpation. It was, however, neither a malignant nor an incurable disease, and generally speaking, yielded readily to mercury. Mr. Smith concluded by exhibiting a specimen of true scrofulous testicle, which he had brought forward for the purpose of contrasting it with the specimens under consideration. Any one who inspected them would readily perceive, that the diseases were quite different. (*Museum, Richmond Hospital.*)

7. *Hydrocele of the Tunica Vaginalis.*—Mr. Adams exhibited a series of preparations, illustrative of this affection. The first specimen, in addition to the usual enlargement of the tunica vaginalis, shewed several small cysts external to that membrane, and occupying the interval or angle between it and the spermatic cord, but unconnected with either. The tunica vaginalis of the opposite side was also distended with fluid. Mr. Adams next exhibited a cast and drawing of double hydrocele of enormous size, which had been successfully treated by injection. The other preparations which Mr. Adams brought forward, were principally illustrative of the great thickening and deposits of bone in the tunica vaginalis, occasionally met with in this disease. In one, the sac was covered by a red, vascular, and flocculent membrane, the product of inflammation. This hydrocele had been repeatedly tapped, and each time a coffee-coloured fluid was drawn off. (*Museum, Richmond Hospital.*)

8. *Hydatid Disease of the Testicle.*—Mr. Adams also laid upon the table a specimen of encysted or hydatid disease of the testicle, described by Sir A. Cooper, and which he has contrasted with fungus hæmatodes. The testicle in this disease is of the ordinary form, although considerably enlarged; the patient feels no pain but that caused by the size and weight of the tumour. In the case which Mr. Adams brought before the meeting the testicle had been removed with success, and he thought that the operation might always be performed with a favourable result. (*Museum, Richmond Hospital.*)

Ninth Meeting, January 31.

Mr. CUSACK in the Chair.

1. *Apparent Hermaphrodite.*—Mr. Bigger said, that during the past week, he had received from his friend, Dr. Kearns, of Westport, an account of an apparent hermaphrodite, with an illustrative drawing, both of which he would beg leave to submit to the meeting. The child was born in the natural way, and was pronounced to be a female by the nurse, but on more accurate examination, Dr. Kearns thought he could feel a small body in each of the labia which had the outline of the testicle, and that he could also distinguish the spermatic cord

passing up towards the ring. In place of the clitoris, he discovered a regularly formed penis, and below this in the natural situation of the vagina in the female, there was a small opening into which a probe could be passed. The child was in other respects healthy and well-formed, and was born of healthy, well-made parents. The mother had another child of the same kind, and two more who were well-formed. In this case the parts presented all the appearance of those of a female, but time would remove any doubt which might exist on the subject.

2. *Inoculation with the Matter of "Grease" in the Horse producing Symptoms of Vaccine in the Human Subject.*—Dr. Stokes presented two drawings of the appearances in a case which had recently occurred in Dublin, which was of importance, as tending to corroborate the opinions of Jenner with respect to the origin of cowpock. For the opportunity of witnessing this case, Dr. Stokes was indebted to Mr. Pakenham, under whose care the patient had been placed. After quoting some passages from the works of Jenner, Dr. Stokes observed, that some had misunderstood Jenner's opinions on this subject, and believed that he had held that the direct inoculation with the matter of grease was capable of producing a disease the same as vaccine in man. This was not Jenner's doctrine. He says that the fluid of grease seems capable of generating a disease like vaccine, *after it has passed through the system of the cow*. But in speaking of the form of disease produced in man by inoculation with the matter of grease, Dr. Jenner was not distinct or accurate in his description. He speaks of ulcerated sores on the hands, inflamed lymphatics, and abscesses of the axilla, and says that many medical friends of his were aware of the similarity between the eruption on the hands after infection with grease, and that which succeeds cowpock, but he does not give any precise description of the appearances which result from inoculation with equine matter in the human subject. He states, however, that persons who have had sores on the hands from inoculation with grease, do not appear to be susceptible of small-pox, and alludes to the great difficulty frequently experienced in producing disease with variolous matter in farriers and persons who have been much engaged about horses. Dr. Stokes proceeded to read some notes of a case of equine infection, which occurred in 1793, and is detailed in Dr. Jenner's work. Three men, on receiving the infection of grease, got sores on the hands, with pains in the axillary glands, shivering, and lassitude; and two of them, who had previously gone through the small-pox, said that their sensations were similar to those they had experienced on the invasion of that malady. The whole duration of the febrile symptoms in these cases was about twenty-four hours. Dr. Stokes next exhibited a drawing of the pustule produced in a child by inoculation with matter taken from one of the men infected with grease. He also exhibited a drawing of the true vaccine pustule, and contrasted it with the former. The only apparent difference between them was, that there was a greater degree of lividity about the equine than the vaccine pustule. As a

further proof of the close connexion between the two poisons, Dr. Jenner states that he has never been able to discover any instance of the prevalence of the vaccine pustule among cows, which could not be traced to cows originally infected, or which had been milked by persons labouring under equine infection. The opinions put forward by Dr. Jenner on this subject were controverted by some of his contemporaries, among whom the principal was Dr. Woodville, who stated that he had made several experiments to try whether cowpock could be produced by grease, but had always failed, and that his friend, Mr. Coleman, of the Veterinary College, had made several experiments of the same kind with a similar result.

The case which had occurred to Mr. Pakenham was this :—The servant of a gentleman residing near town, a man of good constitution and temperate habits, was in the daily habit of cleaning the hoofs of a horse labouring under grease. On one occasion the animal became restive, overturned the bucket in which the diseased limb was being washed, the edge of which cut the man over the upper lip. The groom immediately took up a sponge he had been using, and which was saturated with the matter of grease, and wiped his lip with it. He did the same the next day, and the day after, so that the matter was applied to the broken surface three, and perhaps four times. On the sixth day he became ill, complained of headach, lassitude, and loss of appetite. On the same evening a vesicle appeared on the upper lip, and next day another on the superior part of the cheek over the malar eminence ; a third was placed more internally under the lower eyelid. Dr. Stokes saw him on the ninth day, and the appearances presented by the vesicles were such as were represented in the drawing he was about to exhibit. The drawing was taken on the tenth day. Dr. Stokes pointed out one of the pustules, and observed that on the ninth day it presented an appearance precisely similar to that of a vaccine vesicle, the areola being beautifully marked, and the vesicle so like that of cowpock, that no distinction could be perceived. Around this vesicle there were several smaller and less regular ones. The original wound presented the appearance of a superficial eschar, and the cheek was swollen, but the constitutional symptoms were so slight, that the man was up and walking about. The case was seen by several medical men familiar with the phenomena of cowpock, and all agreed that nothing could be more like it. Dr. Stokes exhibited also another drawing of the parts taken on the fifteenth day, and observed, that the appearance of the scab and of the retreating areola were very similar to those observed in the same stage of ordinary vaccinia. The chief interest of the case was, that it exhibited a form of disease originating in equine infection, and having certainly no connexion with glanders. He had hoped to be able to procure a drawing of the horse's heel, but had not been so fortunate as to obtain it. The case shewed that a disease remarkably similar to vaccinia, might be produced in the human subject by the matter of grease. The only points of apparent difference between them were, that in the latter the

matter contained in the vesicle seemed more purulent, and the surrounding areola somewhat more livid.

3. *Plastic Bronchitis; Formation of Casts of the Air Tubes.*

—Dr. Corrigan said, that the case he was about to bring before the Society was an instance of a disease of rare occurrence. The disease had been termed bronchial polypus—a bad name, for polypi of the bronchial tubes were very different from polypi of the nose and other organs. Bronchial polypi are nothing but a secretion of lymph, which is moulded to the shape of the air tubes. The expulsion of portions of fibrine by expectoration, is a matter of common occurrence in the croup of infancy, and in connexion with the hæmoptysis which precedes or accompanies phthisis; but its occurrence in adults, without phthisis, and assuming an intermittent character, is extremely rare, and any knowledge of it is deserving of attention. The case which occurred in Dr. Corrigan's practice, was that of a gentleman, who was attacked in March, 1838, with symptoms of influenza, from which, after some time, he appeared to recover. About two months afterwards he came up from the country, and applied for advice to Dr. Corrigan. He was suffering at that time from what were supposed to be asthmatic paroxysms; during the fits his respiration was greatly hurried, his lips blue, his countenance anxious, and his whole appearance that of a man in the last stage of disease of the heart. The account which he gave of his symptoms was, that during the day he felt tolerably well, and his respiration was not much oppressed. At night, after sleeping for three or four hours, he awoke with a sense of suffocation, and remained in this state for several hours, when the fit at length terminated with difficult expectoration. He had consulted many practitioners, and had been treated chiefly for nervous asthma. On examining the chest, Dr. Corrigan found the respiration quite natural on one side, but on the other at a certain spot, an intense wheezing was audible, which diminished as the stethoscope was carried upwards or downwards. During the disturbance caused by the examination, a fit of coughing came on; it was of intense violence, and terminated in expectoration. Dr. Corrigan having observed the gentleman expectorate something into his handkerchief, requested to see it, and was surprised to find that it consisted of plastic lymph, moulded in the form of the bronchial tubes. Dr. Corrigan exhibited the specimen and also another of the same kind, sent to him by Dr. Cane of Kilkenny. The disease is of an intermittent character, and may be described as an affection of the bronchial tubes, in which they take upon themselves the secretion of lymph, instead of the ordinary mucus. During sleep, no expectoration taking place, the bronchial tubes became plugged, and the patient awakes in a paroxysm of suffocation, from which he is relieved only by violent fit of coughing with difficult expectoration. The treatment employed by Dr. Corrigan was such as is usually followed, where the secretion of lymph constitutes the chief feature of inflammatory action; the patient was put on the use of mercury, and the day he came under its influence the pulmonary symptoms disappeared, as if

it were by magic. Another case which was under the care of Dr. Cane was treated in the same way, and with a similar result. The points of interest in the case detailed by Dr. Corrigan, were, in the first place, that it went to prove the existence of a disease in the adult, in which the mucous membrane of the bronchial tubes takes on the secretion of lymph; in the next, that the disease may be intermittent and of a chronic character, bearing considerable resemblance to chronic asthma; thirdly, that in cases of disease of the chest every thing relating to the expectoration should be examined, for without a knowledge of its nature in this instance, all the other signs and symptoms would have been useless; lastly, it shewed that the remedy which proves most effectual is, that which is adapted to other forms of disease, in which the most prominent of the inflammation is secretion of lymph, viz. mercury. (*Museum, Digge's-street.*)

4. *Intussusception of the Ileon into the Cæcum; Polypus of the Ileon.*—Mr. Smith exhibited the recent parts in this case, the history of which was as follows:—A woman of spare habit, but apparently healthy constitution, applied for relief at one of the hospitals of the House of Industry, January 25, 1840. She stated that she had been attacked the day before with pain in the abdomen, vomiting, diarrhoea, and tenesmus. At the time of her admission into hospital, her bowels were constipated, but the vomiting and tenesmus continued until the 27th, when she died, her symptoms having strongly resembled those which have been observed to accompany internal strangulation of some portion of the intestinal tube. No tumour could be observed during life, either in the abdomen or in any of the situations where hernia is usually seen. Upon laying open the abdominal cavity, the intestines presented the anatomical characters of the first stage of peritonitis, but there was no effusion of serum, lymph, or purulent matter. The termination of the small and commencement of the large intestines formed a tumour of considerable size, extending from the left side downwards to the right iliac fossa; this tumour, upon examination, was found to be constituted by an invagination of the ileon, about twelve inches of which had passed through the ileo-cæcal valve, into the cæcum and colon: a pear-shaped, fleshy polypus, about an inch and a half in length, grew from the interior of the ileon, and seemed to have been the cause of the invagination. In his remarks upon this case, Mr. Smith alluded to three forms of intussusception, viz., first, that which takes place in the interior of the abdominal cavity, as in the case which he just detailed; secondly, that of which the ordinary form of prolapsus ani presents an example; and thirdly, that which is occasionally seen complicating an artificial anus. Drawings were exhibited illustrative of these three forms of the disease. With respect to the first variety, Mr. Smith observed, that it differed from the other in consisting of three cylinders, whereas in prolapsus of the rectum, and invagination through an artificial anus, there are only two cylinders, of which the internal is formed by that portion of the intestinal tube, which in the normal state was placed directly above the outer or investing cylinder. Mr. Smith exhibited several drawings

illustrative of the mode of production of intussusception, and entered minutely into its anatomical details, and concluded by referring to the recorded cases of recovery from this formidable affection, the invaginated portion of the intestines having, in these cases, sloughed away, the continuity of the intestinal tube being restored by adhesive inflammation agglutinating the serous surface of the internal cylinder, directly above the eliminated portion, to the serous membrane of the outer cylinder. (*Museum, Richmond Hospital.*)

Tenth Meeting, February 8.

Dr. Law in the Chair.

1. *Two Aneurisms of the Arch of the Aorta; Cribiform Perforation of the Trachea; Death by Hæmorrhage.*—Mr. Ferrall, in presenting the specimen and drawings in this case, observed, that the diagnosis of aneurisms of the aorta had been much advanced by the labours of the Pathological Society. The history of the present case was as follows:—

A woman was admitted into St. Vincent's Hospital, labouring under extreme dyspnœa with aphonia; her countenance was extremely anxious, and she was expectorating blood in small quantities. She died during the course of the night, after having had a copious expectoration of blood. The heart was found to be dilated, but the thickness of its walls was not increased. Two large aneurisms were found springing from the arch of the aorta. One occurred close to the origin of the left subclavian, it was of an oval shape, and was attached to the trachea, into which it had opened. The sac was about two inches in diameter, and was partly filled with coagula. Between the trachea and the sac there existed four cribiform openings, situated in the interstices of the rings of the trachea, which latter were quite uninjured. Their orifices and the longest diameter of the largest was about two lines. The second aneurism existed lower down, and compressed the pulmonary artery. This aneurism was bilocular. Still lower down was a third but very small aneurism, in the incipient state, and also two small depressions, which, had the patient lived much longer, would have become aneurismal sacs. The valves of the heart were healthy.

Mr. Ferrall observed upon the integrity of the tracheal cartilages, and pointed out the analogy between this fact and that observed in the erosion of the spinal column by the pressure of an aneurism. He also drew the attention of the Society to the circumstance, that in this case there was the combination of stridulous breathing and loss of voice; a combination supposed to be diagnostic of laryngeal disease. Here, without any such affection, the combination existed. He suggested that the tumour had compressed the inferior laryngeal nerve. He had searched for the nerve with care, but from the matting together of the parts he had not been able to discover any traces of it.

If, on further investigation, it was discovered, that in cases of aneurism existing at the left side of the transverse portion of the arch of

the aorta, and where distinct traces of obliteration of the inferior laryngeal nerve were discovered, suppression of the voice was found to be a prominent symptom, it would furnish an interesting fact in the diagnosis of thoracic aneurisms. The case, however, as Mr. Ferrall observed, put on record one interesting fact, viz., that when a patient presents himself with stridulous breathing and loss of voice, it is not to be concluded that it is one of laryngeal disease and unconnected with aneurism. (*Museum, St. Vincent's Hospital.*)

2. *Spontaneous Gangrene of the right lower Extremity; Obliteration of the external Iliac, Femoral, and Tibial Arteries.*—

Dr. Greene exhibited a portion of the femoral artery, taken from the limb of a person who had died of idiopathic gangrene of the leg. A female, aged 18, had been labouring under symptoms of fever in the country, in which state she was sent to the Hardwicke Fever Hospital. When seen by Dr. Greene, she did not exhibit much of the symptoms of fever, and what traces were present disappeared in the course of a few days, and she was pronounced to be convalescent. On the fifth day after admission she got up, and while about to take her breakfast was seized with stinging sensations and a benumbed feeling in the right leg, succeeded by pain and a sense of coldness. When the part was examined by Dr. Greene, he found the limb quite cold and pale from the toes to the knee; the young woman had also lost all power of the limb, and there was a total paralysis of sensation. The veins of the dorsum of the foot were turgid, but could be emptied slowly by pressure; when the pressure was removed the turgid state returned again by degrees. The femoral artery, when examined, was felt to roll under the finger like a piece of hard cord, and scarcely any pulsation could be distinguished in it. In the external iliac there was also very little pulsation, and none at all could be felt in the tarsal arteries. Two hours after the first seizure the temperature between the toes was 63 on the left, and 62 on the right side; in the left groin it was 80, under the tongue 96. The sounds and impulse of the heart were natural, and there was no throbbing of any part of the arterial system. These phenomena continued for the two following days, during which the temperature of the foot fell gradually to 56, but never went below this. M. Dupuytren states, that one of the characters of this disease is, that the temperature of the affected limb sinks below that of the medium in which it is placed, whether it be air or water. Dr. Greene examined the temperature of the limb in both media, and found this not to be the case. On the third day a livid patch, about six inches in length, formed on the foot, and on the fourth there was a sort of line of separation between the livid and living parts. The temperature of the leg continued as low as before, but the thigh still retained a considerable degree of heat. On the sixth day the centre of the livid patch presented two vesicles filled with a clear fluid, and their margins began to be surrounded with a yellow border. The pain of the limb still continued violent, and it was found necessary to administer opium. The patient died somewhat suddenly on the morning of the seventh day. Some time before

death she had bronchial râles, and a slight crepitus in the postero-inferior part of the right lung, and Dr. Greene looked upon it as pneumonia in the first degree. On examination, the affected portion of lung was found to be in the state surmised by Dr. Greene; the bronchial mucous membrane was highly vascular, and the bronchial tubes contained a quantity of reddish serum. In the stomach there were some traces of gastritis. With respect to the arteries of the diseased limb, they were almost universally filled with coagulum, and their cavities were obliterated. The clot was first found in the common iliac of the right side, immediately above its division into the external and internal iliac, and from this it could be traced down through the external iliac, femoral, profunda, and tibial arteries. The rapid formation of this clot would account for the sudden loss of sensibility, pain, and diminution of temperature which had almost instantaneously taken place. Dr. Greene observed, that during the whole case the thigh maintained its temperature, a fact for which he could not account, except by supposing that a kind of collateral circulation was kept up between its pervious vessels and those of the abdomen. With respect to the nature of these cases there are two opinions; Dupuytren thinks that in all instances they are the result of arteritis. Dr. Greene observed, that there was nothing in the history of the case he had brought forward to show that arteritis was present; there was no inflammatory fever, no throbbing of the affected vessels; none of the usual products of inflammatory action, such as fibrine, pus, or ulceration, could be discovered, and although the coats of the diseased vessels were of a deeper red than usual, the tinge might be owing to imbibition. The next opinion was that which had been put forward by Mr. Turner, in the third volume of the *Medico-Chirurgical Transactions of Edinburgh*. He attributes the gangrene to rupture of the internal coat of the artery, and gives some cases in illustration. The disease is also said to be produced by many other causes, as for instance, ossification of the arteries, the respiration of poisonous gases, and the use of ergot of rye. Dr. Greene had inquired carefully into the origin of his case, and could not attribute it to any of these causes. Observing that there was pain in the limb, and that perhaps it might be connected with inflammation of the vessels, Dr. Greene had caused a small quantity of blood to be drawn, and found that it did not manifest any appearance of inflammatory action. The crassamentum was dark-coloured, soft, without buffing or cupping. There was no appearance of pus in the artery, but Dr. Greene had discovered in the cavity of the left ventricle of the heart a mass of considerable size, somewhat like a polypus, in the centre of which there was a distinct cell, enclosing a fluid of a purulent appearance. Dr. Greene was inclined to attribute the disease of the limb to some cause producing stasis of the blood in the artery, and thought that if the patient had lived longer, the clot in the artery would have shown traces of pus. Perhaps this disease might be in part attributable to the sudden formation of polypi in the cavities of

heart, interfering with the functions of the *carneæ columnæ* and valves. In this case there was one of these polypi twined through the *carneæ columnæ* and *tricuspid valve*.

3. *Abnormal Elbow Joints*.—Mr. Adams presented six specimens of abnormal elbow joints which had come under his observation.

Two of these, which he laid before the Society, were old unreduced dislocations of the elbow joint; two were evidently the result of original or congenital malformation; and two were the consequence of the ordinary functions of the elbow joint having been for many years suspended.

1. *Luxation of both Bones of the Forearm, upwards and backwards, behind the lower Extremity of the Humerus, which last was consequently directed downwards and forwards*.—Owen Nowlan, æt. 40, had been in the Richmond Hospital on different occasions in the year 1836, under the care of Drs. Hutton and O'Beirne, and Mr. Adams; he sought relief for an *hydrosarcocele* and a stricture, and while in hospital it was discovered that he had an unreduced dislocation of both bones of the forearm backwards, behind the humerus. Mr. Adams carefully noted the appearances the joint presented, and had a cast taken of the arm and forearm, which is preserved in the museum of the hospital: the history Nowlan gave of the accident was, that while serving in the British army in Persia, about twelve years previously, he was thrown by a violent young horse he was endeavouring to train, that the left elbow joint was dislocated by the fall, and through the ignorance of the native surgeons he consulted, the nature of the accident was not recognized until too late to remedy the evil. On his return home, in a year after the accident, he left the army, but was enabled to earn his livelihood by grooming horses.

The ordinary characters of the dislocation of both bones backwards, were unusually well marked, because the bony prominences evidently had been enlarged since the accident by ossific growths. When the arm was extended as far as was practicable, it was noticed that the lines of direction of the long axis of the arm and forearm formed with each other an obtuse angle, salient externally, where they met at the elbow joint. When the forearm was semiflexed, the olecranon process was placed one inch and a half behind the inner condyle at the humerus, and the tendon of the triceps muscle carried back by the olecranon process, stood out as much in relief, as does the *tendo Achillis* from the malleoli. Viewing the joint on its external or radial aspect, three very conspicuous prominences were seen; the first was formed by the advanced and enlarged outer condyle of the humerus, covered by the supinator muscles, the olecranon process was the most posterior of the three, and the head of the radius, greatly enlarged, was, as to position, intermediate between the outer condyle and the olecranon. When the joint was viewed on the ulnar or inner side, the internal condyle was found to be less prominent than the outer, and nearer to the olecranon process, although this process was placed so much behind its ordinary position relatively to the inner condyle of the hume-

rus; the notes entered in the hospital case book by the clinical clerk, Dr. Bradshaw, were:

"The olecranon process seems placed very far backwards with respect to the humerus, and seems to have some little inclination inwards; some lateral motion can be communicated to the joint, still this motion is not directly outwards and inwards, but is somewhat oblique, as if the olecranon were the centre of it; on flexing and extending the joint, there is a grating, and crackling, and rubbing sensation felt, as if smooth but hard bodies rubbed together. The external condyle has produced from it posteriorly some adventitious bony growths, which form a cap above and behind the head of the radius, which is itself very much enlarged; the length of the limb is half an inch less than that of the opposite side, and the measure of the circumference of this arm, the left, is also less than that of the other. He can pronate and supinate perfectly, can flex the forearm to nearly a right angle; with the arm can lift heavy weights, and can make any exertion with it which does not require him to raise his hand higher than his shoulder. He is employed as a groom, and can attend to horses as well as ever; he cannot place his hand on the shoulder of the injured limb."

It was concluded that this was a luxation of both bones of the forearm backwards, followed by chronic enlargement of the bones, the absorption of the cartilaginous surfaces, and substitution in their stead of a porcelaneous deposit. The man was in good general health, and left the hospital, having been relieved of the complaint for which he was admitted; but in 1839 became affected with typhus fever, and was admitted into the Hardwicke Fever Hospital, where he died.

Dissection of the Elbow joint.—The elbow joint was examined by Mr. Adams and Mr. Smith. The muscles, as to structure, presented nothing unusual, the biceps and brachialis anticus were much stretched over the transverse eminence, which the lower extremity of the humerus presented.

When the muscles were thrown down, an irregular capsular membrane was exposed, and on opening this some synovial fluid escaped; the cartilages were completely removed from the articular surfaces of the bones. The lower extremity of the humerus had lost all appearance of capitulum and trochlea, and presented a very unequal rough surface. This extremity of the humerus having abandoned the head of the radius and great sigmoid cavity of the ulna, lay exactly in front of the coronoid process of the ulna, and on the anterior part of the neck of the radius. The tendons of the brachialis anticus and biceps seemed to have prevented any further descent of the humerus on the forearm.

The head of the radius formed a perfect circle, and was much larger than usual; it had a lip nearly half an inch deep, its cup was partly filled up, and its centre had given attachment to some short ligamentous fibres, which were attached to the irregular capsule which now existed. The head of the radius was found to rotate freely in the lesser sigmoid cavity of the ulna.

On the same transverse line with the anterior half of the circle of the head of the radius, was the coronoid process of the ulna, so changed as to resemble much in appearance and form the anterior half of the circumference of the head of the radius, for the naturally sharp edge of the coronoid process in the ulna was in this case enlarged, and converted into a thick articular lip, such as the anterior half of the circumference of the head of the radius presented.

It was this altered coronoid process of the ulna which lay behind the humerus, and corresponded to the fossa in the humerus, which ordinarily receives the olecranon. The great sigmoid cavity of the ulna was no longer smooth and excavated, but quite rough, and its extreme point, the olecranon, was placed where the forearm was semiflexed, one inch and a quarter behind the humerus.

The external and internal condyle of the humerus, which bounded laterally the degenerated articular portion, presented anteriorly nothing unusual in their appearance, but posteriorly, from the external condyle, a very large ossific growth was produced downwards and backwards; this had descended somewhat behind the head of the radius, (considering the forearm semiflexed,) and formed an imperfect socket for this bone. This bony growth had been felt in the examination made of the joint when the man was first in hospital. From the back part of the internal condyle there were also some bony depositions, so that when the humerus was detached from the bones of the forearm and viewed posteriorly, it presented a semilunar arch, the concavity of which formed the olecranon fossa. This fossa ever since the bones of the forearm were luxated, had been occupied by the coronoid process of the ulna. So this process was of an arched form, the highest part of which lay in the fossa, and it was bounded on both sides by the growths from the back part of the outer and inner condyles; so that thus was constructed a very secure and, as it appeared from the accurate history and previous observation made of the case, a very useful joint.

II. *Luxation of the Bones of the Forearm backwards upon the Humerus.*—Mr. Adams exhibited a specimen of luxation of the upper extremities of the radius and ulna backwards, of many years' duration; the bones of the forearm had passed upwards on the back part of the humerus as far as the tendons of the biceps and brachialis anticus would permit; the lower extremity of the humerus had acquired a quadrilateral form, and a very irregular surface; the luxated head of the radius was surrounded by an imperfectly formed capsule, from the inner surface of which a bundle of ligamentous fibres analogous to a round ligament passed to be inserted into the depression in the head of the radius. Of this newly formed round ligament Mr. Adams mentioned he had seen another example occurring in a case of unreduced luxation of the bones of the forearm backwards, and six specimens of this new formation in cases of chronic rheumatic arthritis of the bones of the elbow joint.—See Todd's Cyclopaedia, Article, "Abnormal Elbow."

III. *Congenital Malformation of the three Bones of the Elbow*

Joint.—Mr. Adams had under his observation for some years a child which, the last time he took notes of her case, was 11 years of age. Mr. A.'s attention was directed to the elbow joints of this little girl by her mother, which she said had an unusual appearance. She stated, however, that the child suffered no pain in the joints, and had good use of them. Mr. A. found she could fully flex the elbow joints, but could not perfectly extend them; when in this last position, they presented an awkward bowed appearance, the convexity of the arch being external. When Mr. Adams, in making an examination of the elbow in this case, placed his thumb on the external condyle of the humerus, and head of the radius, and at the same time had the forearm supinated, he observed that the head of the radius could be felt to rotate in its proper place, and on its longitudinal axis, as in the perfect condition of this joint; but if now a forced movement of pronation were given to the head of the radius, the latter was observed to slip backwards towards the olecranon process. Every time the girl herself fully pronated the forearm, this species of sub-luxation above described occurred, and in supination the radius resumed its proper situation again. The radius seemed to pass forwards and backwards for the extent of an inch, when it was rotated either in pronation or supination. These movements did not consist in a simple rotation of the radius on its longitudinal axis, as already described, but in a real change of place of the upper extremity of the radius externally, half round the outer condyle of the humerus. There seemed to be a lax state of the ligaments of the radio-humeral and radio-cubital articulations, and no doubt a predisposition existed from these causes to luxation backwards of the head of the radius, but nothing of the kind occurred.

The child was attacked with malignant scarlatina, at that time epidemic, and died in a few hours' illness.

Few surgeons of experience have not been consulted about a lax condition of the radio-humeral joint in children, presenting many of the phenomena above described, but the anatomical characters of such a condition of the elbow joint not having been ascertained, Mr. Adams was very anxious to investigate this matter; with much difficulty he procured leave to make an anatomical examination of the elbow joints in this case.

Mr. Adams wishes, however, merely to record the fact; he would not be understood to imply that all cases of the sub-luxation of the elbow joint are of the same nature as the dissection proves this case to have been.

Mr. Adams, assisted by Messrs. Elliot and Donellan, examined both elbow joints, which were exactly alike, and removed one of them for more careful dissection. This joint he now begged leave to exhibit to the Society. The muscles were removed, and the capsular membrane opened; he observed that the head of the radius was large and unusually excavated in its upper part, the lesser sigmoid cavity on the ulna was also larger than usual, corresponding in size to the radius. The capitulum of the humerus was deficient externally, as if a seg-

ment or portion of the sphere had been here cut off; the head of the radius projected beyond it; the outer half then of the lower extremity of the humerus had somewhat the appearance of the condyle of the femur on a small scale.

The great sigmoid cavity of the ulna presented not only the usual excavation from above downwards, but was by one half narrower than usual; instead of being convex, it was on the contrary excavated from side to side, so as to present truly a scaphoid form, adapted to receive the inner articular half of the lower extremity of the humerus, which no longer presented the semblance of a trochlea or pulley; this was very narrow and convex from before backwards, as well as from side to side, and adapted to the sigmoid fossa of the ulna, already described. The coronoid process was deficient anteriorly; viewing the altered articulation exposed on the side of flexion, the obvious resemblance it bore to the knee joint in miniature was striking, viewed from the popliteal space; there were really crucial fibrous bands in the interior of the joint, which are still to be seen in the dried preparation, which Mr. A. then exhibited; all the ligamentous fibres around were yellow, though unusually strong.

As the humero-radial joint had enjoyed an unusual range of motion, as might have been anticipated, the ligaments were long and lax, indeed no regular coronary ligament existed, but a distinct capsular ligament surrounded the head of the radius, and connected it to the capitulum of the humerus. This nearly perfect capsule was longer, wider, and presented in this portion of the covering of the elbow joint more appearance of strength than it usually does.

The coronary ligament of the head of the radius formed a much wider portion of a circle than usual, but was much stronger, and its fibres were confounded with the lengthened external, lateral, and capsular fibres. It was in consequence of the length of the coronary fibres that the head of the radius was permitted to pass so far backwards in pronation. That this malformation was congenital, no one, Mr. Adams presumed, could doubt; the appearance, the history, the existence of the same deformity on both sides, all prove it.

IV. *Case of congenital Malformation of the Elbow Joint; the Head of the Radius dislocated laterally and upwards, above the outer Condyle of the Humerus.*—The lateral dislocation of the radius from accident, has been but twice noticed by medical writers, one of these cases was published by Sir A. Cooper, and the whole case is comprised in the following lines:—"Mr. Freeman, surgeon, of Spring-gardens, brought to my house a gentleman of the name of Whaley, aged 25 years, whose poney having run away with him, when he was 12 years of age, he had struck his elbow against a tree, whilst his arm was bent, and advanced before his head. The olecranon was broken, and the radius dislocated upwards and outwards, above the external condyle; and when the arm is bent, the head of the radius passes the os humeri. He has a useful motion of the arm, but neither flexion nor extension is complete."

Mr. Adams had himself published the second case of dislocation of

the head of the radius laterally and upwards.—See Todd's Cyclopædia, Article, "Abnormal Elbow."

Mr. Adams would wish now to lay before the Society a cast of the elbow joint of a man, named Horseman, æt. 27, who is now in the pauper department of the House of Industry, and who, besides other congenital malformations of the bones, has a very well marked displacement of the radius outwards and upwards, above the outer condyle of the humerus.

A healthy man, named Horseman, æt. 27, was under Mr. Adams's care, in the pauper department of the House of Industry, who had congenital deformities of many of his articulations, but the right elbow joint presented a very close resemblance to the two cases above described. Mr. Adams had a cast taken of the elbow, which he now exhibited. The arm could not be extended nor fully flexed, but was very muscular, and enjoyed completely the motion of pronation and supination; the left arm was perfect; the man could earn his livelihood as a tailor. When we view the joint on its external aspect, the outer condyle is large, and placed as low down nearly as the olecranon process; above it a very conspicuous, rounded, orbicular-shaped eminence is seen; into this eminence the line of the direction of the radius runs; when the thumb is placed on it, and a motion of rotation communicated to the forearm, this orbicular-shaped eminence moves freely with the radius; the inner condyle also descends very low down, and projects internally, the internal and external condyle of the humerus, and the lower portion of the olecranon process, (in the semiflexed position of the joint which it ordinarily remains in:) are on the same plane; we must infer that the lower extremity of the humerus is probably excavated to receive the great sigmoid cavity of the ulna, the most conspicuous eminence is observed on the outer side of the forearm, immediately above the external condyle, and is formed by the head of the radius, which is evidently of an orbicular form. The head of the radius is above and somewhat behind the external condyle of the humerus, so that the neck of the radius rotates on the ridge of the humerus, which descends to the outer condyle of this bone; its tubercle must play in front of this ridge and head of the radius behind. The state of the ligaments cannot be guessed at, but there can be no doubt that the tendon of the biceps is carried back with the tubercle of the radius, as the tendon can be followed to the situation the tubercle manifestly occupies, and the slender form of the arm immediately above the joint, which it does not elsewhere present, is thus easily accounted for.

This then appears to be a rare specimen, and worthy of being recorded; it is the third case of lateral luxation of the radius recorded, and the first of the congenital luxation of this kind as yet exhibited to the Profession. The man is at present in the House of Industry, and the cast is preserved in the Museum of the Richmond Hospital.

V. Two Examples of the Effects on the articular Surfaces of the Bones of the Elbow Joints, which resulted from long Disuse. In

one Case the Elbow Joints having been permanently in a forced State of Flexion, in the other, the Elbow Joint remained extended; in both Cases Rotation of the Radius had not been performed for many Years.—A female lunatic, apparently about 50 years of age, died last summer in the House of Industry; she had been in a state of complete dementia for many years, sitting wherever she was placed, without speaking a word, taking no notice whatever of passing objects; she never used either hands or feet, and would not eat except the food was placed in her mouth. In bed she lay on her side, her limbs drawn up; she was daily carried from her bed, and placed beside the fire during the winter, and in summer in the open air. Whether in bed or out of it, she always preserved her knee joints and elbows in the same flexed condition. The body was emaciated, and the limbs could not by any force be extended. The soft parts were removed from the articulations of the knee and elbow joints; the former presented nothing worth noticing.

In both elbow joints the following abnormal appearances were noticed:—

The trochlea on the lower extremity of the humerus, which is destined for articulation, with the great sigmoid cavity of the ulna, was normal; parallel to it, and on its outside, instead of the usual capitulum of a round hemispherical form for articulation, with the cup-like cavity of the radius, a second trochlea as it were existed, with a sharp lateral external margin between it and the outer condyle of the humerus.

Thus the portion of the lower extremity of the humerus, called the trochlea for articulation, with the great sigmoid cavity of the ulna, and the external part of the articular surface, usually called the capitulum for junction with the head of the radius, anteriorly presented the same breadth and form, and both had externally sharp lateral margins, with a central ridge between these two surfaces; in a word, possessing all the requisites, so far as the bones were concerned, for a perfect ginglymus joint, without any provision whatever for rotatory movements; indeed, from the very deep digital fossae of a circular form, which existed above the degenerated capitulum for the head of the radius, and above the trochlea for the coronoid process of the ulna, it is manifest that for many years no motion whatever existed in the elbow joint, but that the forearm was permanently and forcibly flexed on the humerus, and the deep fossae, already mentioned, prove the duration and amount of this pressure. The fossa, behind the humerus, for the reception of the olecranon process of the ulna, was, on the contrary, unusually shallow.

The bones of the forearm, where they entered into the formation of the elbow joint, were of their natural appearance, with the exception of the head of the radius, which instead of being excavated on its superior surface, was uniformly convex, and of a form which exactly fitted the round concave digital fossa, already noticed, in the humerus, situated above the altered capitulum.

The appearances are very remarkable, and on many accounts un-

necessary here to advert to, deserve attention. Both elbow joints present precisely the same remarkable characters. They now belong to the collection in the Museum of the Richmond Hospital.

At first sight, the very unusual appearances which the articulation presented might have been referred to some congenital malformation, but this idea was very soon abandoned, when this specimen was contrasted with the second one of this class of malformation then laid before the Society.

VI. This last specimen of degeneration of the form of the lower extremity of the humerus from want of use, was interesting in itself, and also as it seemed to illustrate the nature of the foregoing case clearly, and to prove that the degeneration of the form of the capitulum of the humerus was the result of the articulation never having been used for many years, except as a hinge joint.

A man died of fever in the Hardwicke Hospital, and was removed to the dead house of the House of Industry. He had suffered amputation in the forearm, near the elbow joint. The humerus, and elbow joint, and stump, were removed, that the changes the different structures had undergone after many years might be ascertained. The changes discovered in the bones were certainly unexpected. The lower extremities of the radius and ulna, where amputated about two inches and a half below the elbow joint, had formed an inverted arch, and were so completely united to each other in a loop, that they seemed indeed perfectly identified. It is manifest, in this case, no rotation of the forearm could have taken place, the head of the radius was larger than the capitulum for it in the lower extremity of the humerus. This capitulum presented a sharp edge externally, exactly as the former case did, or as a hinge joint always does; and, as in this case it is probable that the elbow joint was never flexed, there were no traces of digital fossæ above the degenerated capitulum or trochlea. (*Museum, Richmond Hospital.*)

4. *Organic Stricture of the Pylorus.*—Dr. Corrigan said, the specimen he was about to submit was exhibited for two reasons; firstly, with the view of showing the change the pylorus undergoes in certain affections of the stomach; and secondly, with a view towards greater accuracy in pathological description. Many of these specimens had been classed as cancerous or malignant, without having any claim to the designation; the case before him was one of the kind. The disease consists essentially in an affection of the pylorus, analogous to stricture of the œsophagus, viz., a deposition of lymph in the submucous tissue, accompanied by contraction of the calibre of the tube. The pylorus becomes gradually narrowed until it will scarcely admit the passage of a goose quill, the result of which is, that digestion is so much interfered with that the patient dies of inanition. Dr. Corrigan exhibited a cast showing the appearance of the parts *in situ*. The stomach was enormously enlarged from the undue detention of the ingesta; it appeared to be capable of containing near a gallon of fluid, and descended as low as the hypogastric region. The interior was sound, with the exception of the pylorus, which pre-

sented the thickening of the submucous tissue, and the diminution or calibre already noticed. There was a small ulcer in the vicinity, but by no means sufficient to account for the symptoms. The history of the case bore out the views put forward by Dr. Corrigan. The disease was of twelve months' standing, and the patient presented on admission the usual dyspeptic symptoms observed in such cases. In addition to these he had the usual vomiting after meals. About an hour and a half after taking food he threw it up, and it was observed that he vomited more fluid than he had swallowed. He emaciated rapidly, but he had no vomiting of dark-coloured matter, no peculiar hue of countenance, and on dissection there was no trace of malignant disease discovered in any other organ. (*Museum, Digges-street School.*)

3. *Hyperostosis of the Ribs in Chronic Empyema.* — Dr. Stokes exhibited the thorax of a female who died fourteen months from the first attack of pleuritis of the left side. On her admission, an extensive effusion existed, and the heart was found to pulsate at the right side of the sternum, and soon after pericarditis supervened, yet without pain or any symptom of increased irritability of the heart. The disease was only discovered by the existence of the friction sounds over the whole heart. This was the third case noticed by Dr. Stokes, in which a perfectly latent, dry pericarditis occurred while the heart was dislocated by an empyema. Dr. Stokes exhibited drawings illustrative of two cases of this description, in which there had been no pain, palpitation, nor irregularity of the heart preceding or accompanying the attack of pericarditis. The effusion in the case now before the Society was partially absorbed, and the heart was restored to its natural position, but the side continued extremely dull on percussion. After some time the patient began to expectorate large quantities of muco-purulent fluid, and soon after this a large and distinct gurgling could be heard in the supra-spinous and supra-clavicular region. Soon after this the patient complained of the occurrence of an unusual sound in the anterior portion of the left side whenever she coughed. A puffy tumour made its appearance in the second intercostal space, which could be easily obliterated by pressure, and conveyed a distinct sensation to the touch, as of air mixed with liquid. The tumour was reproduced in each fit of coughing, and its appearance was always accompanied with a sound audible to a great distance, and much resembling the barking of young puppies. For a considerable length of time this phenomenon used to recur at irregular intervals. The abdomen ultimately became enlarged, and the patient sank with diarrhoea.

The compressed lung was strongly adherent to the mediastinum and postero-superior portion of the chest. It was not more than three inches and a half in length, and one in depth. It presented scarcely a trace of its normal structure, and the large bronchial tubes and the branches of the pulmonary artery terminated in culs de sac. The left pulmonary artery, previous to its entering the lung, was not diminished in size. The eighth nerve was somewhat smaller than its opposite, and felt unusually hard. There was no evidence of tu-

hercle in the affected lung, nor in the right lung. A sinuous passage existed in the second intercostal space which seemed to communicate with the mammary abscess, which had so long existed; but dissection did not discover the source of the emphysematous tumour above mentioned.

The structure of all the true ribs in the affected side was remarkably altered. They were exceedingly dense and hard, and nearly three times as thick as those in the opposite side. They were so closely approximated as that in many places the intercostal spaces were wholly obliterated. Between a few of the ribs, however, the intercostal muscles could be seen forming a red elevated line, as if they had been doubled in themselves, and forced outwards between the ribs. There was no actual bony union of the ribs, but the chest on the affected side felt, when pressed upon, as if it were a continuous bony case, giving a dull sound on percussion, and resisting pressure remarkably. The ribs on the opposite side were thin and very elastic.

Dr. Stokes observed, that though from the analogies of disease we might be prepared to expect such a change of the ribs in very chronic empyema, he was not aware of its having been hitherto described. Dr. Stokes concluded by alluding to the observations of Andral on the ossification of the costal cartilages in phthisis, and the hypertrophy of the bones of the cranium in chronic hydrocephalus. (*Museum, Park-street.*)

Eleventh Meeting, February 15.

Mr. ADAMS in the Chair.

1. *Absence of one Lobe of the Cerebellum*.—Dr. Greene brought forward the case of a young man, æt. 20, in whom one lobe of the cerebellum was deficient; the individual was deaf and dumb from his birth. He died upon the twelfth day, of fever, in the Hardwicke Hospital; he was a well made, muscular young man, with perfect use of his limbs; the genital organs were well developed, and cicatrices of ulcers existed in each groin. The left lobe of the cerebellum was altogether deficient; the right lobe and corresponding crus cerebelli were healthy, but the left crus, consisted merely of a small tubercle connected with the pons. The crus cerebri of the left side was smaller than that of the right, and the annular protuberance, owing to the different development of its left side, was irregular in its form, and placed obliquely; its longest diameter being from behind forwards and to the right side. The origins of the nerves were normal; the right occipital fossa was remarkably shallow, and the foramen magnum was placed obliquely, its antero-posterior diameter being thrown towards the right side. Dr. Greene alluded to two cases recorded by Cruveilhier, of deficiency of both lobes of the cerebellum, in each of which there was loss of the power of motion in the lower limbs. (*Museum Richmond Hospital.*)

2 *Lumbrici in the Hepatic Ducts*.—Dr. J. Power exhibited the recent parts in this case; the ductus communis was distended with a large collection of lumbrici; its diameter exceeded half an inch,

the hepatic duct was still larger, being in some parts, more than an inch in diameter, and filled with lumbrici. The ducts in the substance of the liver contained numbers of this description of worm, as did likewise the stomach and intestines. It was not known whether there were any symptoms of hepatic derangement during life, the specimen having been found in a subject brought into the anatomical room of the Richmond School of Medicine. (*Museum, Richmond School.*)

3. *Mechanism of Perforation of the Substance of the Lung and Pleura, in Cases of Disease of the Substance of the Lung.*—Dr. W. Stokes said, the specimen he was about to present was interesting, as connected with a subject, which he had brought before the Society on a former occasion, namely, the mechanism of perforation of the substance of the lung and pleura, in cases of disease of the substance of the lung. The idea generally entertained, with respect to this kind of perforation, is, that it is the result of ulceration commencing in the substance of the lung, and proceeding outwards, or in other words, that the abscess of the lung, tubercular or otherwise, makes a passage for itself, on the one hand, into the bronchial tubes, and on the other, into the cavity of the pleura. Certain cases, however, have been recognized, in which the reverse of this takes place, as where the matter of an empyema perforates the costal pleura, and makes a passage for itself through the substance of the lung into the bronchial tubes. Andral and Louis have also referred to cases of localized inflammation of the pleura, followed by sloughing and an opening into the substance of the lung. But in those cases, where perforation of the pleura is combined with tubercular ulceration of the lung, the perforation has been supposed to commence in the lung, and make its way towards the surface, until at length it perforates the cavity of the pleura. Dr. Stokes said, that the interest of the case he was about to bring before the Society, consisted in the proof it afforded, that even in cases of tubercular phthisis, the perforative ulceration may proceed from without inwards. The history of the case presented nothing extraordinary. It was that of a lady aged 40, who was attacked with phthisis; there was nothing unusual in the symptoms or phenomena of the disease. The usual signs of the development, and softening of tubercles in the upper part of the right lung, were observed, with dulness under the clavicle, and over the scapula and right side of the spine, but without any sign of perforation of the pleura. During the course of the disease she was seized with a severe attack of diarrhoea, and sank rapidly. On making an examination shortly before death, the ribs and intercostal spaces seemed to be pushed outwards, as if by a quantity of serous fluid in the cavity of the pleura, but there was no evidence to prove that it contained air. The anterior portion of the right lung, when taken out, presented some very curious appearances: in the first place, in the substance of its upper portion there was a large anfractuous cavity, and the pulmonary tissue in its vicinity was infiltrated with tubercular matter,

looking at first sight like a portion of lung in the suppurating stage of pneumonia. On the anterior surface of the lung there were two cup-shaped depressions of about an inch in diameter, and on closer examination these were found to correspond with perforations of the lung into which a probe could be passed; lower down there was another depression of the same kind in the commencing stage. Dr. Stokes observed, that it was quite plain that the process by which these perforations were caused commenced externally, for the solution of continuity had evidently taken place in the pleura, in the first instance, a fact of which any gentleman might satisfy himself by inspecting the preparation. The superficial circular destruction of the serous membrane was best seen when the preparation was wetted. In two of these the perforation was complete, in the third it was imperfect. In those where actual perforation had occurred, as shown by the passage of air bubbles when the parts were compressed under water, the orifices were surrounded by opaque circular patches of an ash colour, and about three lines in diameter. The surface of these patches was somewhat flocculent; in the third depression the patch existed, it was exactly similar to those about it, but no perforation had occurred. Dr. Stokes said he considered the case as one of great interest, for though it was one of pulmonary consumption, the process of destruction had commenced in the serous membrane proceeding from without inwards. It was also interesting as showing that there might be complete perforation in the pleura and lung without pneumo-thorax; for no air had been discovered in the cavity of the pleura. The reason why no air had been effused was because the lung had been adherent to the pleura in the situation of the perforation.

4. *Depositions of calcareous Matter in the axillary Glands.*—Dr. Carlile said that the person from whom the specimen he was about to exhibit had been taken, had been subject for many years to swelling of the glands of the axilla, coming on in spring, and to a certain degree disappearing during the course of the summer. He also had abscesses occasionally in the same situation; but for many years back he suffered only from swelling of the axillary glands. Some time ago he was attacked with swelling of the glands of the right axilla, which for the space of fourteen days gave him more uneasiness than usual, and ultimately terminated in abscess. This in course of a short time burst, and, along with a quantity of purulent matter, discharged at various times upwards of one hundred small granular bodies, consisting chiefly of carbonate and phosphate of lime; after their discharge the individual completely recovered. (*Museum, Park-street School.*)

5. *Ossification of the Crystalline Lens and outer Layer of the Retina; Atrophy of the optic Nerves and Tractus Optici.*—Mr. Smith exhibited a series of specimens illustrative of these morbid alterations in the apparatus of vision; the bony matter was deposited beneath the choroid coat, and apparently in the outer layer of the retina, which was, in all the specimens produced, converted into an osseous

shell, enclosing the disorganized vitreous humour; the choroid coat was loosely connected to the external surface. In all the preparations the crystalline lens was likewise converted into bone, and the eyeball shrunk and atrophied, and the corresponding optic nerve wasted in a remarkable manner, the atrophy extending (in all the specimens but one) along the optic tract of the opposite side; in one, however, the atrophy extended along the tractus opticus of the side corresponding to the atrophied optic nerve. Mr. Smith referred to the cases published by Mr. Wardrop as examples of ossification of the choroid coat, and alluded to the different opinions held upon this subject, some thinking that the ossific matter is deposited in a false membrane formed as the result of inflammatory action upon the outer surface of the retina, while others believe that the retina itself is the seat of the alteration. Mr. Smith expressed his opinion that the choroid was very rarely indeed converted into bone, and that, in the great majority of cases, the outer layer of the retina, described by Dr. Jacob, was the seat of the ossific deposit: in all the cases which he had seen of what is usually termed ossification of the globe of the eye, the choroid could be readily detached from the subjacent bony shell. Mr. Smith said this preparation was also interesting, as bearing upon the question of the decussation of the optic nerves. One of the preparations, in which the atrophy of the nerve extended along the tract of the same side, would seem to support the account given by Cruveilhier, Mayo, and others as to the disposition of the nerves at the commissure, namely, that the outermost fibres of the optic tract go to form the outermost fibres of the optic nerve of the same side, that the next in order cross over to the optic nerve of the other side, and that the innermost fibres of the tractus of one side are continuous with the innermost fibres of the opposite; these are, properly speaking, the commissural fibres, and the only ones which exist in certain animals. Mr. Smith, in conclusion, alluded to the experiments of Magendie and Flourens, and also to the question of the origin of the optic nerves, and remarked that although proofs drawn from pathology were not the strongest that could be adduced upon this subject, yet they were calculated to furnish supplementary evidence of a most valuable description. (*Museum, Richmond Hospital.*)

Twelfth Meeting, February 22.

Sir H. MARSH, Bart., in the Chair.

1. *Abcess in the left Iliac Fossa.*—Dr. Law adverted to the notice that had been taken of ileo-cæcal abscess at former meetings of the Society. He begged leave to exhibit a specimen these matters had formed in the left iliac fossa, and under circumstances not hitherto observed. The circumstances under which it occurred were these: a man, aged 45 years, was admitted into Dun's Hospital, with dyspepsia and diarrhoea, under which he had laboured for a considerable time. On admission he complained of pain in the left side of the abdomen, a little above Poupart's ligament. In this situation, and about midway between the spine of the ilium and the pubes, there

was a distinct fulness, very painful when pressed. He stated that he had felt pain and uneasiness in this spot for the first time, about ten days before admission. He complained of distress in making water; leeches applied to the seat of the pain, and the hip bath gave him some relief; however, after a few days, Dr. Law, thinking that he could detect something like fluctuation in the tumour, directed an incision to be made into it; this was followed by no immediate result, but after poulticing it for two days, there came away a quantity of thin, greenish, purulent matter with a decidedly feculent smell. This, however, afforded no permanent relief, for the man sank in about four days, exhausted by diarrhoea and the irritative fever of the local inflammation. The post mortem examination exhibited the cellular membrane behind the peritoneum, just when this membrane is reflected from the anterior wall of the abdomen on the iliac fossa, in a sloughy state, infiltrated with fetid pus. The matter, and the cellular membrane in this disorganized state, extended from the iliac fossa down along the side of the great intestine, as far as where the rectum lies in contact with the bladder. On examining the large intestine, there were two small ulcerations in the mucous membrane of the colon in the transverse portion. The rest of the intestine was healthy, but at the termination of its descending portion, it was considerably dilated. The canal of the portion constituting the sigmoid flexure was so contracted, as scarcely to allow a goose-quill to pass. The intestine retained its normal diameter in the pelvis. On slitting open the intestine in its contracted portion, it required some force from the induration of its coats. The mucous membrane, thrown into irregular projections, nearly met from opposite sides, so as almost to obliterate the passage. External to this was a whitish, pearly cartilaginous line, whose resisting structure required some effort to divide. There the contraction ceased, and the intestine resumed its normal diameter; the mucous membrane was extensively ulcerated. The question was, to what was the abscess owing? Dr. Law considered it to be due to the irritation from the remora of the fæces in the portion of the intestine immediately above the stricture, just as the delay of the fæces in the cæcum produces the ileo-cæcal abscess. He wished to remark upon the nature of the stricture, that it was not true scirrhus, but a conversion of the sub-mucous cellular tissue into a fibro-cartilaginous structure, a result of inflammation propagated from the inflamed mucous membrane. Dr. Law thought it was wrong to consider these strictures always malignant in their nature, or that they were never so, but always the result of common chronic inflammation, converting the cellular membrane into a hard, unyielding structure; they were, in fact, sometimes of the one character, and sometimes of the other. He remarked upon the fetor of the discharge, a feature of collections of matter in the vicinity of an intestine, which had already been noticed, and which Dr. Law considered to be due to air escaping from the intestine, independent of any perforation, but as an effect of Dutrochet's principle of exosmose and entosmose, and mixing with the matter, and the imparting to it its peculiar fetor. This air some-

times gave to the cellular membrane in such cases an emphysematous feel, and when mixed with matter, communicated a sense of gargouillement. (*Museum, Sir P. Dun's Hospital.*)

2. *Occurrence of the Bothriocephalus Latus in several Members of a Family.*—Dr. Graves presented two specimens of tape worm. He said, the difficulty of determining the cause of the existence of the entozoa was acknowledged by all; any facts, therefore, connected with the subject had some claim to notice. The tape worm which he held in his hand was passed by a young lady, living in one of the best and most healthy localities of Dublin. The other was passed by a maid-servant of the same family. Similar worms had been passed by another servant, and by the master of the house. Now, tape worm is not a very common complaint in Dublin, and it would be hard to explain its occurrence in so many members of the same family, unless it were acknowledged that there was something in the food or drink used by those individuals, or what is still more unlikely, that the disease could be communicated from one person to another. There are two species of tape worm described, viz., the *T. Solium* and *Bothriocephalus Latus*. The Swiss and Russians are chiefly infested with the *bothriocephalus*, the English, Dutch, and Germans with the *tenia*. The specimen exhibited by Dr. Graves was referred by him to the species *bothriocephalus*, which is not common in this country. He said he would take the earliest opportunity of determining the species in the other individuals, and if they proved to be the same in all, it would go to establish the fact of a common origin.

3. *Severe Purpura Hæmorrhagica.*—Dr. Graves presented a drawing of the appearances in the case of a man in Sir P. Dun's Hospital. The case was one of purpura hæmorrhagica in an extreme degree. The patient was a labouring man, employed on the railroad, and there was nothing in his diet or mode of living to account for it. He came into hospital with rigors, quick pulse, and symptoms of febrile excitement. He was considerably exhausted by hæmorrhage from the nose, which lasted three days, and for which plugs were introduced into the nostrils with very little effect. He was subsequently attacked with hæmorrhage from the gums, palate, intestinal canal, and kidneys. He also had effusion of blood into the cavity of the tympanum, followed by deafness, detachment of the small bones of the ear, and ulceration of the tympanum. Dr. Graves said he wished to make one observation with respect to treatment. After some days the man was so exhausted by hæmorrhage, that no one expected anything like a recovery. All the usual means had been tried without effect; acetate of lead, acids of various kinds, and all sorts of astringents. Finding all to fail, Dr. Graves had recourse to turpentine and opium. At this period he was labouring under delirium, tossing about restlessly in bed, his pulse 130, and his extremities cold. While in this state he was ordered to take twenty drops of spirit of turpentine every second hour, a grain of opium every third hour, and to have twenty-four ounces of wine during the course of the day. Next day his intellect was observed to be much clearer,

he had slept during the night, his tongue was greatly improved, his pulse more regular; in fact he was better in every respect. By persevering in this plan of treatment for three or four days, he recovered completely. Dr. Graves observed, that in this case the blood seemed to be in a dissolved state, but he was not inclined by any means to found on that circumstance any hypothesis from which he would conclude that purpura was attributable to a dissolved state of the blood. Two of the most remarkable cases of this disease he had ever witnessed occurred in young and powerful men. Both had bleeding from the nose, gums, intestinal tube, and other parts. Blood was drawn from the system in both cases, *and in both it was buffed and cupped as in rheumatism and other inflammatory affections.* About the eighth or ninth day an eruption, like measles, appeared all over the body, and both sunk about the seventeenth day. Dr. Graves also exhibited a drawing, taken from a girl in the Meath Hospital, who had a combination of purpura with bullae. He had brought it for exhibition, as the subject had been alluded to by Dr. Hutton at a recent meeting of the Society.

4. *Large Calculus of the Parotid Duct.*—A calculus removed by operation from the parotid duct was shewn by Sir Henry Marsh. The calculus was sent to him by the gentleman who performed the operation, Mr. Madden, of Portglenone Dispensary. The calculus is an unusually large one; at the time of its removal it weighed 127 grains. The man on whom the operation was performed, lived for many years afterwards, he had no return of the disease, nor did he manifest a tendency to the formation of calculi in any other part. An analysis was made of the calculus by Mr. Wm. Colles; it was composed of phosphate and carbonate of lime, with animal matter.

5. *Biliary Calculus.*—Sir H. Marsh shewed also a biliary calculus; it was angular, and somewhat larger in size than a nutmeg. This calculus was the cause of a long continued and dangerous obstruction in the bowels of the patient from whom it was expelled. The patient was a lady between 60 and 70 years of age, she had had previously frequent attacks of gall stones, but was not in any of these attacks jaundiced. On the passing of this gall stone, she was affected in the manner usual to her, she had pain in the epigastrium, vomiting, and great depression without acceleration of the pulse. On all former occasions, after the lapse of a few hours, the bowels yielded to medicine, acted largely, and the symptoms soon subsided. On the present occasion, the bowels for ten days resisted the action of medicine; during this period she suffered from continual nausea, and vomiting of greenish and yellowish fluids in large quantities, at intervals of six, eight, or ten hours. Temporary ease, and intervals of unquiet rest, were obtained after each discharge of fluid matter from the stomach. The lightest nutriment was loathed and soon rejected; the pulse frequent, feeble, and intermitting; the depression of the vital powers was extreme; the extremities cold, clammy, and livid; occasional distressing hiccup; extreme emaciation. Through the integuments of the abdomen on the right side, about three inches from the umbilicus, a

small solid tumour could distinctly be felt. In this region, the abdomen was tender and painful when pressed. On the eleventh day from the commencement of the attack, she was prevailed upon to take phosphate of soda dissolved in light broth; it remained on the stomach, a copious discharge from the bowels of fluid matter took place in the evening; she passed a somewhat less uneasy night, and next day full doses of scammony, finely pulverized with crystals of tartar, were retained on the stomach, and acted largely on the bowels.

In the midst of a large mass of solid and fluid fæces, the calculus now exhibited was discharged. Next day a great number of much smaller gall stones were passed, mixed with fæces. The transition from the most imminent danger to what might almost be called a state of health, was singularly rapid.

6. *Evacuation of Biliary Calculi through the abdominal Parietes.*—Another case of biliary calculi fell under Sir H. Marsh's observation, which he thought deserving of notice.

A lady of feeble constitution, about 70 years of age, had been suffering for years from various dyspeptic symptoms; she had never been jaundiced.

After her return from Cheltenham, whither for the benefit of her health she had been sent, Sir H. M. was requested to visit her. She complained of debility, languor, loss of appetite, and irregularity of the bowels, and mentioned incidentally, that she had had a boil over her stomach, which burst, and, notwithstanding various applications, had remained open. He urged the necessity of examining it; but this, on the plea of its being a mere trifle, was resisted. At his next visit having, with much difficulty, obtained permission to make an examination, he found about three inches to the right, and a little above the umbilicus, a fistulous opening about half an inch in diameter. On carefully examining it with a probe, a hard substance, easily displaced, was found to occupy the ulcerated space, which, by change of position, protruded somewhat. He then introduced a pair of forceps, and with no small difficulty gradually extricated an angular biliary calculus. Thin yellowish matter, such as is found in the upper parts of the small intestines, flowed out through the opening. Next day when he visited his patient, he extracted another calculus, similar in form, and nearly of the same size, which he found protruding through the orifice. Two days afterwards, a third; and after the lapse of another day, a fourth in like manner projected, and were removed.

For three weeks the fistulous opening gave exit to thin, inodorous, yellow, fluid matter. Strips of adhesive plaster were daily applied, it contracted gradually, and ultimately healed completely. This lady lived for several years in tolerable health, and died at the age of 82, dropsical, with signs of valvular disease of the heart.

Before concluding, Sir H. Marsh said he wished to mention one or two additional facts on the subject of biliary calculi. He had at home a dried preparation of the gall bladder and its ducts, with a large angular gall-stone, fixed firmly on the common duct, almost in

contact with the duodenum. The calculus was so placed, that some bile could pass between it and the walls of the enlarged duct; accordingly bile was found in the small intestines, and the patient exhibited but a very slightly jaundiced appearance. The cystic and common ducts were enormously enlarged. The patient, a gentleman, aged 62, had led for many years a sedentary life, had long been subject to various bilious and dyspeptic symptoms, and to frequently recurring attacks, characterized by the usual symptoms which announce the passage of a gall-stone. From one of these attacks he did not, as heretofore, recover; the pain subsided, but he remained in a state of great exhaustion; he loathed food, was unaccountably restless and uneasy, he could not sleep, the mouth and tongue were dry, the extremities became cold, dark, and clammy, the pulse feeble, rapid, and intermitting; there was occasional incoherence; the most powerful stimuli failed to sustain the vital actions. On the fourth day from the subsidence of the pain, he died, exhibiting no symptoms except those of irritation, and extreme depression of the vital powers. *After the most accurate investigation of all the viscera, nothing abnormal, except the gall-stone lodged in the common duct, was discovered.* From the continued irritation caused by this calculus, which had just reached the duodenum, but passed no further, the patient appeared to sink.

Sir H. Marsh brought forward the case of an indolent, full-living, plethoric lady, about 45, who, after years of suffering from painful attacks, at first conceived to be hysterical, but at a later period (from the uniformly recurring fits of jaundice) known to be from gall-stones, passed a biliary calculus, fully as large as a guinea-hen's egg, and similar in form. The attacks appeared to be constantly brought on by strong mental emotions. A biliary diarrhoea accompanied the passage of the gall-stones through the intestines. At the time of the escape of the calculus into the duodenum, there were evidences of intense inflammation, such as, great pain on pressure in the right hypochondrium, hot skin, thirst, headach, and rapid tense, pulse. After large bleedings, general and topical, and the adoption of other antiphlogistic treatment, the pain abated, the diarrhoea set in, and the large calculus described passed from the bowels. This lady soon and completely recovered, and now upwards of ten years have elapsed without any return of the symptoms of gall-stones. The large size of this calculus, and the symptoms accompanying its passage, render it probable that the transit was effected, not along the duct, but by the ulcerative process: large as it was it caused no intestinal obstruction. The calculus, which, in the first detailed case, so long and so dangerously obstructed the bowels, was very much less in size than that passed by this lady. It may be well, however, to remark, that the large one was round, smooth, and oblong, the other angular and square. It is not amiss to notice, that two of the patients affected with gall-stones (whose cases are alluded to) were never jaundiced, and the others had had many successive painful paroxysms, indicating the calcular irritation, before a jaundiced appearance was exhibited. The

explanation of this is not difficult, but the existence of gall-stones has often been denied, and an erroneous view of the disease formed, because the pain at the epigastrium, and the other symptoms were not accompanied with, or followed by icterus.

7. *Necrosis of the inferior Maxillary Bone, preceded and accompanied by Cancrum Oris.*—Mr. Smith said the communication he was about to make related to a formidable disease, termed gangrenous erosion of the cheek, or cancrum oris, a disease most frequently observed among the ill-fed and cachectic children of the poor. The case he was about to allude to occurred in the Richmond Hospital, where the patient was for some time under the care of Dr. M'Donnell. The child was about two years old, and had enjoyed good health until about four months before its death, when a quantity of a solution of acetate of lead was given to it by mistake. This was followed by obstinate diarrhoea, and considerable emaciation. At the end of nine weeks the diarrhoea was checked, and about the same period a livid red spot made its appearance on the mucous membrane of the gum of the lower jaw. This spread gradually to the cheek, and remained for some time without appearing externally. About the 14th of February, a circumscribed spot, of a dusky red colour, made its appearance on the cheek, close to the angle of the mouth, accompanied by tumefaction of the cheek, oedema of the eyelid, and remarkable fetor of the breath. On the following morning, in removing the poultice the greater part of the cheek came away, in a state of slough, leaving a large ragged opening into the cavity of the mouth. The child was admitted on the 17th of February, and died on the 19th. The phenomena of gangrenous erosion, and the perforation of the cheek were well shown in the specimen laid before the meeting. The sloughing process had extended to the superior maxillary bone, laying open the cavity of the antrum. The condition of the lower jaw was very remarkable. One half of it, with the teeth, was necrosed, separated from all its natural connexions, and enclosed in a new formed shell of bone. The rapidity with which the new bone had been formed was very striking. With respect to the state of the other parts, the stomach presented some dark ecchymosed spots, the mesenteric glands were diseased, and there were several patches of ulceration in the large intestine. Mr. Smith exhibited a cast of the whole body, shewing the emaciation of the trunk, swelling of the hands and feet, and destruction of the cheek. He observed that the disease frequently occurred during the prevalence of exanthematous affections. In one case, of which a drawing was exhibited, it had occurred during the progress of fever. About the period of convalescence a livid red spot made its appearance on the cheek, ran rapidly into gangrene, and in the course of thirty-six or forty hours, caused an enormous destruction of the side of the face. Mr. Smith alluded to the affection of the cheeks, occasionally produced by the use of mercury, and expressed his opinion that it differed from the true cancrum oris; he expressed doubts that mercury would produce cancrum oris, the constitution being sound, and not weakened by previous disease; but

admitted that it might favour the development of this peculiar form of gangrene, if at the time of the exhibition of the mercury, the constitution was debilitated, and the system weakened by previous disease; this debilitated condition, whether produced by disease, or the result of bad food, imperfect clothing, and living in an impure atmosphere, would appear to be necessary for the development of this formidable affection, recovery from which was not of very frequent occurrence. (*Museum, Richmond Hospital.*)

8. *Phlegmasia Dolens, terminating in Gangrene.*—Dr. E. Kennedy presented the recent parts in this case, which was one of phlegmasia dolens terminating in gangrene, an occasional termination of that disease. The patient was delivered of her second child after a natural labour on the 2nd of February. The placenta was retained, and it was found necessary to introduce the hand to effect its removal. She complained afterwards of some abdominal uneasiness; but there was nothing in the case to attract attention until the 12th, when her left leg began to swell. The swelling commenced in the calf of the leg extending gradually to the thigh, and accompanied by some tenderness in the iliac region. She went on in this way suffering acute pain for four or five days, and on the 17th a distinct redness was observed along the course of the saphena vein; this subsequently extended to the calf and upper part of the leg. On the 19th a large gangrenous spot made its appearance on the upper and outer part of the thigh, immediately behind the trochanter. On the 20th she was attacked with hiccup and symptoms of depression; during the course of the night small gangrenous spots made their appearance on various parts of the limb, and she died with symptoms of coma on the 21st. On examination eighteen hours after death, the cavity of the abdomen was found to be healthy, and the uterus of its natural size, but firmly attached to the pelvis on the left side by thickening and adhesion of its broad ligament. The thickening was of a very peculiar kind, it appeared almost cartilaginous, and the knife grated against it. On exposing the vena cava Dr. Kennedy exhibited some thickening of its coats, extending also into the femoral and saphena vein. The femoral vein was found to contain a tube of lymph, and, on pressing the vein between the fingers, a quantity of sanguineous fluid oozed out. The cellular tissue of the limb was extensively infiltrated with a clear serous fluid.

Dr. Kennedy also exhibited another preparation of a similar kind, but without any gangrene. Like the former case it had proved fatal. On examination the veins of the limb were found to be coated with lymph and obstructed throughout their whole course. In the case first brought before the society he said he had not examined the veins of the uterus, but would do so. On making an incision into them Dr. Kennedy found them filled with fluid blood, and in one or two he discovered some slight traces of the effusion of lymph. With respect to the first of these cases he thought the disease was to be attributed chiefly to venous inflammation. Others, however, might be inclined to adopt a different opinion, and would look upon the venous

inflammation as secondary. The character of the gangrene observed in that case was also worthy of notice. In the dry gangrene which arises from arterial obstruction, the swelling of the limb, and the enormous distention of the cellular tissue is never observed, at least in the commencement of the case. This exemplifies the difference which may arise from the nature of the obstruction; in the venous obstruction the swelling and infiltration of the limb is very remarkable, in the arterial there is scarcely any. (*Museum, Lying-in Hospital.*)

Thirteenth Meeting, February 29th, 1840.

Sir P. CRAMPTON, Bart., in the Chair.

1. *Injury of the Fœtal Head.*—Dr. Fitzpatrick exhibited a fœtus, born during the course of the morning. In this case pregnancy went on as usual, and every thing appeared favourable, until about ten days ago, when the mother, while sitting on the sofa, was kicked accidentally in the side of the abdomen by one of her own children, a very strong boy. From this period she found that the motions of the fœtus were no longer perceptible. Two days afterwards she had some hæmorrhage, but so slight, that she did not think it necessary to have advice. On the following day she had slight hæmorrhage again, but thought so little of it, that she went about as usual, and continued to do so until the morning of the 29th, when she was seized with labour pains, and delivered in six hours.

The fœtus was of the ordinary size of an eight months' child. The cuticle on different parts of the body was abraded, presenting in some degree the appearance of a syphilitic fœtus, for which supposition, however, not the slightest foundation existed.

The bones of the head were dislocated, and lay in a confused heap at the top of the spinal column; the brain was completely broken down and converted into a homogeneous fluid.

The scalp containing this fluid was the presenting part, and when protruding through the os uteri gave an exact representation of a tense bag of the membranes; on passing the finger up between it and the uterus, the broken down bones of the head were felt posteriorly, and decided the character of the presentation and the death of the fœtus. The quantity of liquor amnii was remarkably small.

The umbilical cord was of a pale blue colour, and softer than natural; the placenta, of the ordinary size, presented no other peculiarities than those produced by the arrest of the circulation.

Dr. Fitzpatrick said he was induced to exhibit the fœtus for examination, as it seldom happened that an opportunity offered of examining the phenomena of death from direct violence under such circumstances.

2. *Chronic Rheumatic Arthritis of the Knee Joint.*—Mr. Adams said he wished to make a few observations on a peculiar affection of the knee joint. It was the same disease he had exhibited specimens of in the hip, shoulder, elbow, and wrist joints. In the hip it

was generally termed *morbus coxæ senilis*; in the other joints it had got the name of rheumatic gout, of rheumatic arthritis, &c. It is almost invariably accompanied by enlargement of the bursa in the vicinity of the affected joint. When it affects the knee, the joint presents the form and appearance to which the name *hydrops articuli* was given by the ancients. The swelling is chiefly observed on each side of the tendon of the *crureus*, and of the patella. This bone is thrown forwards, and its ligament presents well-defined outlines; when pressed down, the patella is felt to strike against the condyles of the femur. There is also an enlargement of the joint in the popliteal region, which has been occasionally mistaken for popliteal aneurism, but when the joint is flexed, the presence of fluid in its cavity becomes so obvious as to remove all doubt. When the heel is struck with the palm of the hand, little or no pain is experienced, but when it is rotated, pain and crepitation are felt by the patient: the changes of the weather affect him. The patient from whom the specimen exhibited by Mr. Adams was taken, had the disease four years, and attributed it to cold caught while sleeping on a dray. This was followed by rheumatic fever, and chronic rheumatism of an obstinate character.

Mr. Adams said he wished to show also what he had seen of the disease in persons who had died of other complaints. On the articular surfaces there are depressions or grooves, which mark the commencement of the process of destruction in the cartilages of incrustation. After some time, portions of the cartilage are removed, and the surface of the bone is covered with an ivory deposit. At different points round the condyles, bony nodules and vegetations make their appearance, and are very remarkable in the advanced stage of the disease; it is to these the enlargement of the heads of the bones is in a great degree owing. With respect to the synovial membrane, it is in general very vascular, and presents several fimbriated processes hanging into the interior of the joint; in some cases there are foreign bodies in the cavity of the joint. In the advanced stage of the disease, the patella is thrown over the outer condyle, or dislocated. The enlargement observed at the posterior surface of the joint is chiefly owing to the increased size of the bursa which lies under the internal head of the *gastrocnemius*. Mr. Adams exhibited several specimens in illustration, and said that the attention of the Profession was now, for the first time, directed to the enlarged bursa as a sign of this disease. This enlarged bursa is normally situated, beneath the inner head of the *gastrocnemius*, and communicates with the joint by a species of valvular opening. He stated that he had traced this disease, chronic rheumatic arthritis, in almost every one of the larger joints. It is a very chronic affection, and never shortens the duration of life. It is incurable, but is sometimes benefited by rest, and the use of hydriodate of potash, with decoction of sarsaparilla. Cruveilhier calls this disease "*usure des cartilages*," and has well delineated it in his plates. He is wrong, however, in thinking it commences in the cartilages. The first link in the morbid chain is disease of the synovial membrane; this is followed by

destruction of the cartilages, and the formation of an ivory deposit on the articular surfaces of the bones. (*Museum, Richmond Hospital.*)

3. *Sloughing of the left Bronchial Tube from the Pressure of an Aneurismal Tumour; Emphysema of the sub-cutaneous Cellular Membrane.*—Dr. Greene said he was about to present a recent specimen of a disease of which several examples had been laid before the Society; he alluded to thoracic aneurism. The case was that of a man who was first attacked about fourteen months ago. The first symptom observed by him was slight superficial pain in the right side of the neck, a little above the clavicle; this was followed by pain extending to the right shoulder and down the side. This pain was neither violent nor constant, and continued for a long time before the patient became sensible of a pulsation within the chest. On observing this he became alarmed, and applied for advice at the Richmond Hospital. At this period there was no external tumour, but a slight pulsation could be felt over the spot where the aneurismal tumour afterwards appeared. On examining the chest Dr. Greene found dulness on percussion just below the clavicle, to the extent of about four square inches; the rest of the chest was clear on percussion. A double impulse could be felt over the tumour, but no *bruit de soufflet* could be heard. Shortly afterwards he began to complain of dysphagia; the difficulty of swallowing was not constant, being at one time worse than at another. There was a slight difference in the pulse at the wrists, that of the left side being somewhat weaker than the other. There was very little congestion of the veins, and no numbness, cramps, or œdema of the upper extremities. In this state the man continued, with very little variation, for three months. Both lungs were equally clear on percussion, but it was quite plain that the left bronchus was subjected to a certain degree of pressure, for the respiratory murmur was much weaker in the left lung than in the right. He was admitted into the Whitworth Hospital, where he remained for the last two or three months. During this time his respiration was laryngeal, but his voice was never affected until about ten days before his death. He suffered chiefly from pain, anxiety, and want of rest, and laboured under constant dyspnoea, but it was never violent nor in paroxysms. About ten days before his death an emphysematous swelling made its appearance on the front of the chest, and ran down both arms; this went on gradually increasing, and extended over the abdomen, back, and scrotum. He began to cough up a very foetid matter, his pulse became weak and low, and he sank, not suddenly, or from symptoms indicative of rupture, but from progressive exhaustion. On examining the parts after death, the cause of all the phenomena was explained. The left bronchial tube was greatly compressed by the tumour, and was in a state of slough, the sloughing process extending along the trachea, into the larynx. From this the air had escaped into the posterior mediastinum, from which it had made its way into the sub-cutaneous cellular tissue of the chest. The right bronchial tube, though in contact with the aneurismal tumour, was quite per-

vicious. With respect to the dysphagia, it was explained by the situation of the cesophagus, which was pressed in front by the aneurismal tumour, and behind by the arch of the aorta. With respect to the state of the pulse, it appears that the aneurismal sac was placed pretty nearly in the centre between the two carotids, and that it must have exercised nearly an equal pressure on the arteries of the upper extremities, so that no indication as to its position could be drawn from the state of the pulse. As to the slight degree of pain experienced it might be accounted for also by the situation of the aneurismal tumour, which had little or no attachment to the spine, and sprang from the anterior surface of the aorta. When tumours of this kind proceed from the posterior part of the arch of the aorta, and lean backwards towards the spine, the roots of the nerves are apt to be compressed, and hence the pains, numbness, and cramps of the muscles of the upper extremities and chest. Another important feature in this case was that the patient died, not of rupture of the aneurismal tumour, but of gangrenous destruction of the windpipe and lung. To what could the gangrene of the lung be attributed? Dr. Carswell says that gangrene of the lung is sometimes caused by compression and obstruction of the nutrient arteries. Dr. Greene thought that in his case there had been compression of the bronchial arteries of the left side. This case, as well as another, of which a drawing was shown, served to bear out Dr. Carswell's opinion. In the case detailed the lower portion of the left lung was in a state of slough, and in the upper portion there were some small gangrenous cavities. The last observation which Dr. Greene wished to make had reference to the voice, which was natural throughout the whole course of the disease until about ten days before death, when the extension of inflammation to the larynx and rima glottidis gave rise to hoarseness. Some time back Mr. Ferrall stated at a meeting of the Society that he was very near over-looking a case of an aneurism of the aorta in consequence of the voice being raucous, and threw out the hypothesis that this might depend upon pressure on the recurrent nerve. Dr. Greene was inclined to differ with him upon this point. The situation of the aneurismal tumour and its connexions were such, that the recurrent nerve must have been subjected to pressure for a long time, and yet there was not the slightest affection of the voice until the larynx became inflamed. Dr. Greene had seen two cases of aneurism with hoarseness, from irritation propagated to the larynx, and followed by spasm; but in these instances the hoarseness was only occasional, and by no means constant. With these exceptions, Dr. Greene did not know any cause for raucous voice in cases of aortic aneurism. (*Museum, Richmond Hospital.*)

4. *Congenital Deficiency of a Portion of the right Cerebral Hemisphere; permanent and rigid Contraction of the left Arm.*—Mr. Smith said the preparations he was about to exhibit were taken from the body of a girl aged about eighteen, who had been for the greater part of her life a lunatic. She had been for some years an inmate of the House of Industry, had laboured under epilepsy, and died in a paroxysm of epileptic convulsions. On examining the body,

the first thing which struck Mr. Smith was a contracted condition of the hand, a state which he had found to be almost invariably connected with a deficiency of some portion of the opposite side of the brain. To this circumstance he had drawn the attention of the Society at a former meeting. This condition of the hand is not owing to any malformation, or deficiency in the bones, but is entirely the result of muscular contraction, and is to be distinguished from that state of the hand termed the club hand, of which an accurate delineation has been given by Cruveilhier. In this instance, on examining the external surface of the brain, only a small deficiency was observable in the left hemisphere (the right hand being the seat of the contraction), but on looking into the interior of the lateral ventricle, he found the deficiency to be very considerable, the wall of the ventricle, where the cerebral substance was absent, being completed by the arachnoid membrane. It is singular, that whether this deficiency be small or great, the result, with respect to the condition of the arm, is precisely the same. What is the immediate cause of this state of the hand? Some experiments and observations published by Dr. Marshall Hall, in the *Medico-Chirurgical Transactions*, seem to afford grounds for an explanation. Dr. M. Hall draws a line of distinction between cerebral and spinal paralysis. In the latter case, the irritability of the parts is destroyed, and hence the paralysis; in the former, the paralysis exists in consequence of the influence of volition being withdrawn. Dr. Hall also was led, from several experiments and observations, to conclude that where the influence of volition is withdrawn, the irritability of the parts is increased. This explanation, he thinks, bears upon the cases of idiots with a contracted state of the upper extremity, and cases of hemiplegia, where the arm is ultimately drawn into a permanently contracted state. He thinks the contraction is caused by the principle of tone constantly acting on muscles which are never relaxed by any act of volition, and observes, that a connexion may be traced between the defective or injured portion of the brain and the motor column of the spine. Mr. Smith thought that this hypothesis went far to explain the permanently contracted state of the hand, observed in cases of deficiency of a portion of the brain. Independently of this, the case brought before the Society was worthy of notice, as presenting an example of an almost universal deposit of scrofula. A portion of the intestinal canal, of the mesentery, and of the peritoneum covering the diaphragm, were exhibited as examples of scrofulous degeneration; the latter, in particular, was studded with small tubercles. He also shewed the axillary, cervical, mesenteric, and inguinal glands, all of which were enlarged and filled with scrofulous matter. Even the solitary gland which lies on the inside of the arm, a little above the internal condyle of the humerus, was diseased. It was remarkable, that the lungs were comparatively free from tubercles; but this was a circumstance which Mr. Smith had frequently observed in cases where there was extensive tubercular development in the abdominal cavity and glandular system. There were a few tubercles in the apex of the left lung, but the right was free from disease.

The liver was of a very light brown colour, and felt like a piece of dough or putty, it retained the impression of the finger. Mr. Smith said, he did not recollect having seen a similar condition of the liver. The gall bladder contained about an ounce of bile. (*Museum, Richmond Hospital.*)

5. *Aneurism of the Aorta complicated with Tubercle of the Lung.*—Dr. Stokes said that the Pathological Society was indebted to Sir Philip Crampton for drawing attention during the last session to the combination of aneurism of the aorta with tubercular degeneration of the lung. Of this combination, a very interesting specimen had been exhibited during the last session. The case to which Dr. Stokes would now direct the attention of the meeting, was that of a man about eight-and-thirty, who had served with the British Legion in Spain, and was exposed to much hardship and privation. At St. Sebastian a tree fell on him, striking him on the loins and back, and injuring him so much that he was obliged to remain two months in hospital. He recovered in course of time, and came back to Dublin, apparently in good health. On his admission into the Meath Hospital, about a year after his return, during which he had been employed as a printer, he complained of cough and palpitations, symptoms which he attributed to his accident at St. Sebastian. He had cough, attended with yellow viscid expectoration, streaked with blood, and frequent palpitations, but had neither pain nor night perspirations. The superior and anterior portion of the left lung sounded dull on percussion, and there was distinct dulness over the spine of the left scapula. In this situation there was evident cavernous respiration with gurgouillement; under the left clavicle there were mucous, under the right, sonorous râles. His pulse was full, throbbing, and of a dicrotous character, and the pulsation of the vessels of the neck was very remarkable. A distinct double sound could be heard over the sternum, accompanied by a double bruit de soufflet. There was no evidence of enlargement of the heart, and the sound over the cardiac region was clear and natural. The question was, did he labour under aneurism? The fact of his having a tubercular cavity in the lung was against this supposition, but Dr. Stokes, bearing the case brought forward by Sir P. Crampton in mind, did not allow this circumstance to prevent him suspecting the existence of aneurism. There was no dysphagia, no distinct tracheal respiration, nor had he the usual distress of breathing observed in patients labouring under aortic aneurism. Dr. Stokes examined him with great care, to ascertain if he could distinguish any diastolic pulsation in the situation of the bruit de soufflet. On pressing the left hand against the sternum, and the right between the shoulders, a deep-seated diastolic throb could be felt; this phenomenon continued up to the period of the man's death. On dissection of the heart, it was found to be rather below the average size; the left ventricle was remarkably thick, as compared with the right, which was atrophied, soft, and small, similar to that of a person in phthisis. In this instance, the right ventricle represented the phthisical heart, the left, the aneurismal.

The ascending portion of the aorta was nearly six inches in width, its internal surface rough, and presenting numerous atheromatous and bony deposits; the dilatation commenced immediately above the aortic valves. Here was an explanation of two of the phenomena observed during life, namely, the bruit de soufflet, and the deep seated diastolic throb, which followed the impulse of the heart, and was felt over the sternal region.

The case was one of great interest with reference to the state of the left ventricle and the aortic valves, and tended to bear out the opinion of Dr. Corrigan, that in cases of aortic aneurism, a healthy state of the ventricle may be expected when the semilunar valves are not diseased.

The ordinary symptoms characteristic of aortic aneurism, which in this case were either feebly marked or altogether absent, were absence of great suffering, of pressure on the trachea or œsophagus, no change in the pulse at the wrist, and none of the violent throbbing which characterizes false aneurism. Dr. Stokes, said that with reference to diagnosis, Mr. Hamilton, who had examined the case on the 12th of February last, observed that the bruit de soufflet was audible above the situation of the heart, and from this sign was led to conclude, that there was either aneurism or dilatation of the aorta. His opinion of the nature of the disease was fully borne out by the post mortem examination. Dr. Stokes, in conclusion, observed, that nothing remained for him, but to exhibit the state of the lung. The substance of the lung would be found on inspection to contain a considerable quantity of tubercular accretions. In one of the lungs, there were a great many tubercular deposits, which, in consequence of their dark colour, were not evident at a distance, but as the preparation was too heavy to send round; gentlemen might examine it at leisure after the termination of the meeting. (*Museum, Richmond Hospital.*)

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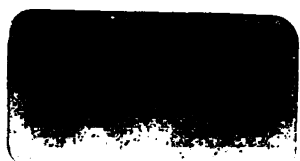
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